# AMERICAN VOCATIONAL JOURNAL

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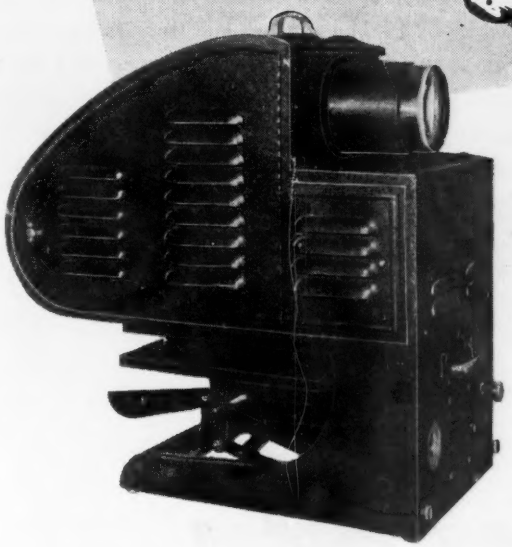

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# American Vocational Journal

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NOV. 1947

VOLUME 22

NUMBER 9

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# American Vocational Association, Inc.

**American Vocational Association, Inc., advances American Education by developing economic competence of youths and adults. The Association promotes the professional interests of persons engaged in vocational and industrial arts education. It encourages full-time and part-time programs in these fields: Agriculture, Home Economics, Business and Distributive Occupations, Industrial Arts, Industrial Education, Rehabilitation, and Vocational Guidance.**

★

# Strength in State Organizations

AS another year rounds out in the American Vocational Association, it is gratifying to have reported a membership of more than 23,300. This is a 15 per cent increase over the previous year. From early fall membership returns, it seems probable that next year which begins the first of December, the all time high of 26,798 in 1941-42 will be surpassed.

These figures are important, not only because of the national strength which they indicate but more specifically what they reflect in state programs. The old truism, "a chain is no stronger than its weakest link" is especially pertinent here. AVA nationally is no more than the combination of members who constitute the state groups. These, in turn, are dependent upon the individual membership. Thus this organization recognizes the influences and the importance of each member's contribution.

The extent to which individual members are made to feel an essential part of the organization is dependent upon the state leadership. Vocation education embraces all of those branches of education having for its prime objective the preparation for useful employment. Thus the teachers and leaders in distributive education, in business education, in industrial arts and in homemaking education must be made to feel needed as much as those in trades and industry and agriculture, whose sections have consistently led in membership.

There has never been a greater need for unified endeavor among vocational educators. First, Congress, in passing the recent George-Barden Act authorizing increased Federal funds for vocational education has in reality issued a mandate to extend the various practical programs of vocational education to more young people and adults. How to do this can best be determined through joint committees and well-planned conferences that state vocational associations are in a position to sponsor.

Second, all educators are recognizing certain fundamental values in vocational education for the very large percentage of high school graduates who neither go to college nor prepare for specific vocations. Clear thinking by able leaders from all areas of vocational education will be essential if the contributions of vocational education to this large group are to be planned effectively. It is important through state channels to keep vocational teachers abreast of such movements and also to enlist their intelligent cooperation.

At this stage in the history of the American Vocational Association it seems fitting to pay highest tribute to those state vocational organizations which are providing the kind of constructive programs that enlist membership of all vocational teachers.

*Florence Fallgatter*

President
American Vocational Association, Inc.

★ ★ ★


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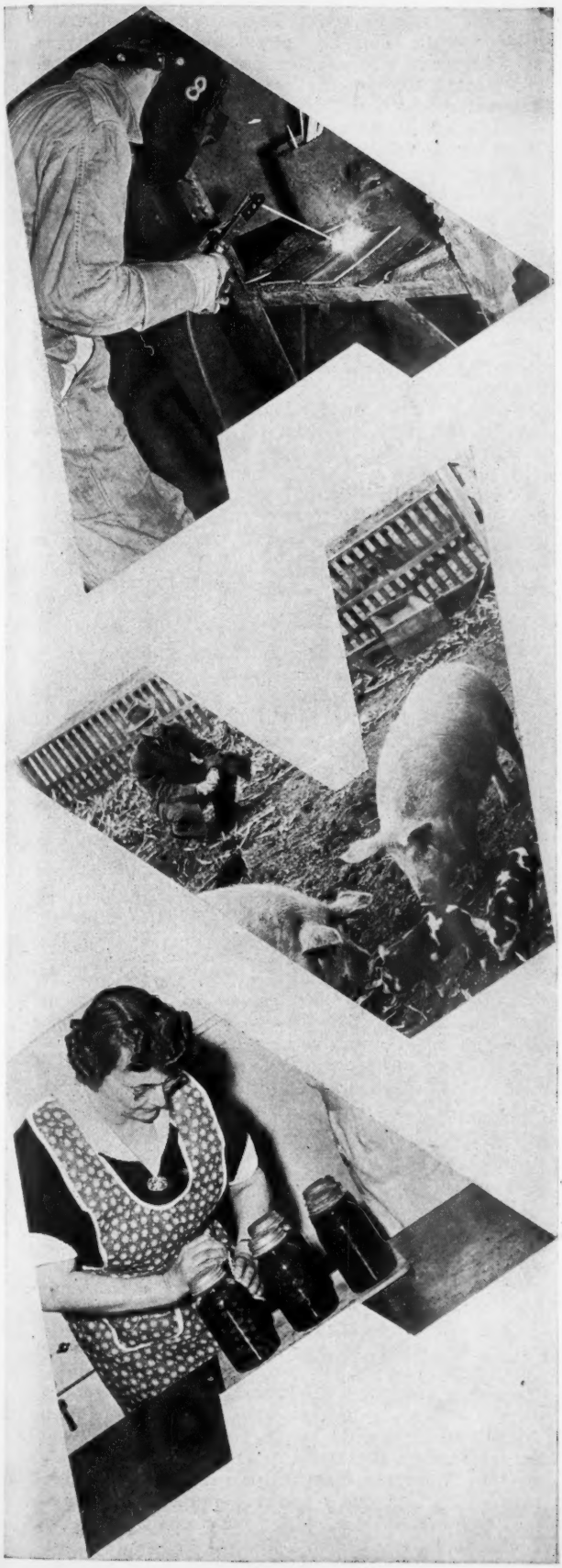


# CONVENTION

THOSE attending the AVA convention in Los Angeles December 15-18 should plan to use their leisure time before, during, and after the sessions to enjoy the interesting attractions of California. Near Los Angeles are many places worth a few hours of time.

On a single trip one may see the old Plaza which was the center of the early pueblo; the old Mission opposite the Plaza; and Olvera Street which is preserved as an authentic Mexican street market. On the same trip, and within a few blocks, are China City and the new Chinatown.

Another short trip includes Hollywood Boulevard (at Christmas time known as Santa Claus Lane), the beautiful residence districts of Beverly Hills and Bel Air, the University of California at Los Angeles in Westwood, and radio broadcasting and motion picture studios.

Toward the southwest is Los Angeles Harbor, Wilmington, San Pedro, Fort MacArthur, and colorful Terminal Island with the great Navy docks, wharves, factories, and the base for the tuna and sardine fleets.

In the opposite direction, by way of the Arroyo Seco Parkway, is Pasadena; the famous Huntington Library and Art Gallery; and beautiful Santa Anita Park where horseracing opens the day after Christmas.

# LOS ANGELES

Griffith Park and the Griffith Park Planetarium and Observatory is a comparitively short trip.

Within a few minutes the visitor may go to Exposition Park; the Memorial Coliseum seating 105,000 persons, and the home field of the University of California at Los Angeles and the University of Southern California; the Olympic Swimming Stadium; and the University of Southern California.

The Spanish Missions form a background for the beginning of modern civilization on the Pacific Coast. Visitors from other parts of the nation should visit as many of the missions as possible. San Gabriel Mission a few miles to the east of Los Angeles, and the San Fernando Mission 20 miles to the north, are the most accessible from Los Angeles. The former was founded in 1771, the latter in 1797.

### Los Angeles Merchandising Institute

Situated within a block of the AVA convention headquarters at the Biltmore Hotel is the Los Angeles Merchandising Institute, a branch of the Los Angeles City College.

One of the features of this latest development in the field of distributive education is its joint development by the merchants and the Los Angeles City Board of Education. To help start it, the merchants donated $30,000 for decorating and furnishing it, and for equipment.

# DECEMBER 15-18

When the president of the Downtown Business Men's Association of Los Angeles turned the keys over to Superintendent Kersey of Los Angeles City Schools on Sept. 16, 1947, the new Merchandising Institute began its first year of operation with a capacity enrollment. The school occupies the entire third floor at 623½ S. Grand Ave. in downtown Los Angeles, and its furnishings are of startling modern design. It has a reception room and a large display room which can be utilized as an auditorium. There are four classrooms, a conference room, and a retailing library. The retail salesmanship classroom is equipped with a wall showcase, a floor showcase, mirrors, electric cash register, and a platform for salesmanship demonstrations.

The merchandising courses are offered in (1) a cooperative retail training program and (2) an in-service training program on the adult education level.

Students in the daytime division attend school three hours a day in the morning and work four hours in the afternoon in downtown stores. They carry a college course of 15 semester hours of work during the first semester in the following subjects: Cooperative merchandising I including salesmanship, fabrics, retail English, retail mathematics, and retailing. During the second semester the following subjects are offered: Cooperative merchandising II; mechanics of color, line, and design and fashion; non-textiles; retailing II; and retail mathematics II.

The course is one year in length and students who have previously completed one year of college will receive the Associate of Arts Degree.

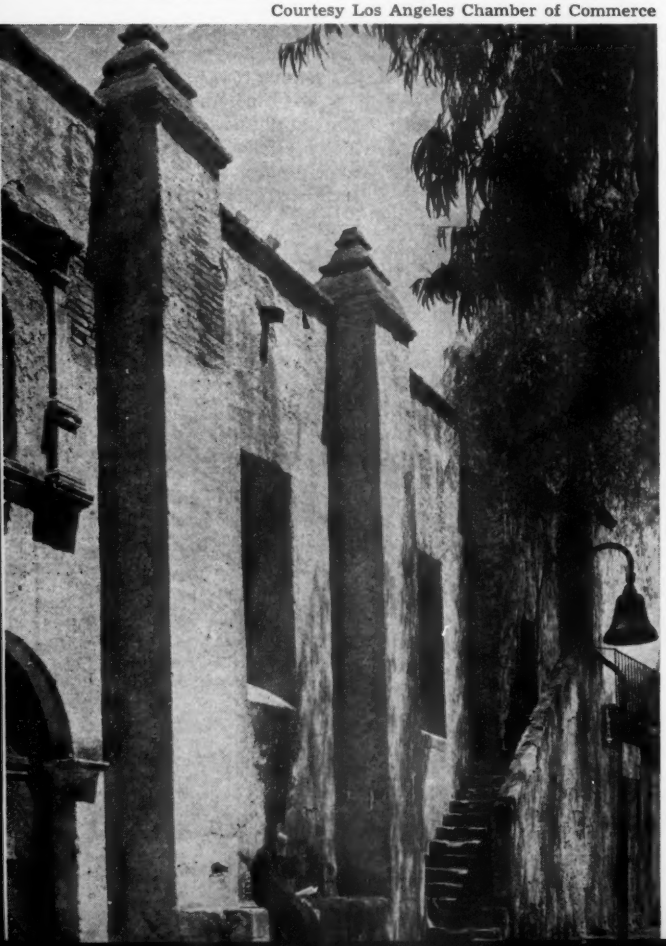
Applicants must be high school graduates between 18 and 25 to be considered for admittance to the Merchandising Institute. They must have a good citizenship and scholastic record during high school and be in good health. They are interviewed by a faculty admissions committee and then are referred to the interview committee of the Downtown Business Men's Association composed of store personnel executives. If this committee accepts the student he is admitted. There are applications on file now for the class which will start in February.

Instruction is given by highly qualified instructors who have completed graduate courses in merchandising and have had work experience in major retail stores. They are assisted by guest lecturers from downtown stores selected for eminence in their fields. Currently, two full-time instructors are employed. They teach in the morning and coordinate in the stores in the afternoons, making certain that each student receives experience in all of the major departments of the store during their year of training.

Evening classes in fundamentals of salesmanship, sales speech, and advanced salesmanship are offered jointly with the Sales Executive's Club of Los Angeles. Most of the students are salesmen or prospective salesmen employed by the 300 firms that are members of the Sales Executive's Club. Evening classes in advertising, textiles, and insurance salesmanship are in process of organization.

AVA delegates are invited to visit the Institute.

**San Gabriel Mission, only a few miles from AVA headquarters**
Courtesy Los Angeles Chamber of Commerce



### Business Education Program

The program committee under the direction of Dr. William R. Blackler, assistant state supervisor, Bureau of Business Education, California State Department of Education, is organizing an interesting program for this section of the convention. The theme will be "What's New in Business Education."

Monday, December 15, from 2:30 p. m., the state supervisors of distributive education will hold their annual meeting.

Tuesday the program will consist of a symposium explaining the organization and set-up of the Los Angeles Merchandising Training Institute, followed by a symposium on labor relations in business. Outstanding workers in labor relations, including management and labor, have been invited. to participate.

Section I, Tuesday afternoon, will be for teachers and supervisors of general business and office occupations. The theme will be "The Communications Phase of Business." Demonstrations and explanations of various types of recording machines, both voice and manual, will be explained, illustrated and demonstrated.

Section II, Tuesday afternoon, will be for supervisors of distributive education. For this round table meeting each state has been requested to report on recent developments in distributive education. States have been asked to prepare for distribution mimeographed digests of new programs. A general discussion will follow reports.

Wednesday will be given to field visits. One planned visit is to Sears Roebuck Mail Order Department, and at a luncheon meeting at the Hotel Alexandria, business groups which have contributed to the program will be honored.

Thursday morning a section meeting for general business and office teachers and supervisors will be devoted to a symposium on the major theme, "What's New in Business Education."

Section II for the distributive teachers and supervisors will stress audio-visual materials in occupational training, with showings and demonstrations of recent training films.

From 10:30 a.m. to 12:00 noon Thursday there will be a general meeting of the section with two outstanding speakers discussing "What's Ahead for Business Education."

Dr. Ira W. Kibby, chief, Bureau of Business Education, California State Department of Education, is the vice-president of the American Vocational Association representing business education and will have general charge of this section.

**Open House at Santa Barbara**

One of the extra attractions in connection with the AVA convention in Los Angeles will be the Open House at Santa Barbara the day following the final meeting. An invitation has been issued by Dr. J. Harold Williams, acting provost of the University of California, Santa Barbara College, to all delegates and visitors to the convention, to set aside Friday, Dec. 19, as Santa Barbara Day, and participate in a planned program which will include Open House in the Department of Industrial Education and visits to other points of interests.

The teacher training program at Santa Barbara College has been intimately connected with developments and expansion of industrial arts in public education for nearly 40 years. Activities in this field started in Santa Barbara in 1908, and a few years later the Santa Barbara Normal School for Manual Arts and Home Economics was opened for preparing teachers in those two new fields of public school work. After the depletion of enrollment caused by the first World War was partly overcome, the College became a four-year institution, and while other major courses were added, Manual Arts and Home Economics still were outstanding features. The period 1920-1940 saw a continued growth in the program of industrial arts in California schools with Santa Barbara playing the leading part in preparation of teachers for the expanded program. At the time of the outbreak of the second World War, there were approximately 350 major students working toward degrees in the Department of Industrial Education, and the new main building in which the Department is now housed, was completed.

In 1944 the Santa Barbara State College was made a campus of the University of California and the new name was received. In that transfer it was decided to centralize all teacher education in industrial arts for the university exclusively at Santa Barbara.

During the second World War, the efforts of the Department were largely diverted to war production training programs with emphasis upon work in radio for the Signal Corps and Off-Reservation Training for the Air Service Command. At the end of hostilities, the return of former students and enrollment of new students caused a rapid increase of majors until this fall when there is an all-time high of regular degree students, and also a record demand in connection with enrollments of students from other departments of the College.

The new industrial education building oontains 62,000 square feet of floor space apportioned for work in many diversified areas of industrial arts. These facilities include two large shops for woodworking and woodcraft, three drafting rooms, a number of small laboratories for photography, separate workrooms for automotive work, machine shop, aeronautics, printing, general metal, electricity, radio, industrial science, and audio-visual education. A lecture-room, a conference room, and a small auditorium with complete stage and projection rooms are included as is also a departmental library and reading room. Courses in applied ornamental horticulture are carried on in auxiliary buildings.

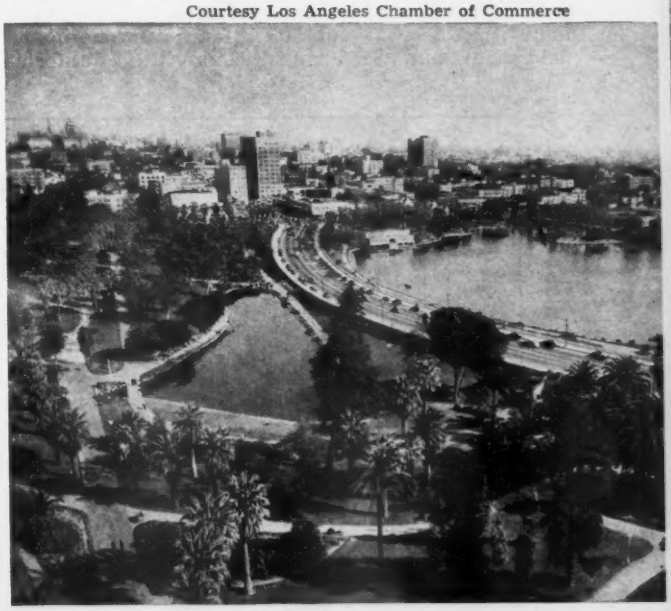
Courtesy Los Angeles Chamber of Commerce

**Southern California orange grove and snow-capped mountain**

The detailed program for the day is being planned by Prof. Emanuel E. Ericson, chairman of the Department of Industrial Education, and the departmental teaching staff of 20 members. As now planned, this program will include visiting classes in operation in the latter part of the forenoon, a luncheon followed by additional visiting and informal discussions. Later the group will be conducted on a tour of historic points in the city including the famous Mission and the world-famed Santa Barbara Court House where visitors may study outstanding examples of architecture with expert workmanship in ceramics, wood, furniture, and mural paintings. A professional banquet will end the activities of the day.

**Wilshire Boulevard, Los Angeles, crossing MacArthur Park**

Courtesy Los Angeles Chamber of Commerce



**Aircraft training meets CAA requirements; dressmaking students learn design; machine shop training (All Frank Wiggins)**

Santa Barbara is conveniently located 100 miles northwest of Los Angeles on U.S. Highway 101 and on the coastline of the Southern Pacific Railroad, between Los Angeles and San Francisco. Hotel accommodations are excellent, but it is wise to make reservations early. Requests for reservations may be sent to the Department of Industrial Education, University of California, Santa Barbara College.

### See the Big Trees

Beyond the purple mountains that separate Northern and Southern California, visitors will find many points of interest. The magnificent Yosemite and Sequoia Parks may be snow-filled although all-weather roads are maintained into these areas throughout the winter.

North of San Francisco on the coast and at Santa Cruz south of the San Francisco bay area are the big trees. In San Francisco are the Aquarium and Zoo, the Golden Gate and Bay Bridges, Coit Tower, the Memorial Auditorium where the United Nations organization was born, Chinatown, and Fisherman's Wharf, to mention a few. The University of California is at Berkley.

At Sacramento there is the capitol buildings and grounds and nearby is Sutter's Fort with relics of the gold rush. The chain of missions, instrumental in building California, extend along the coast from Somona to San Diego.

Many teachers of agriculture will want to visit the Salinas Valley winter vegetable area and the cotton industry of Merced and Tulare, and everyone in this field should put on his "must" list a visit to California State Polytechnic College at San Luis Obispo, one of the nation's unusual educational institutions. Here "learning by doing" has been applied on the college level by a corps of faculty members drawn largely from the ranks of those who have been successful vocational teachers in secondary schools, or extremely successful in industry and agriculture. "Cal Poly" also has an extensive industrial and engineering program as well as its more widely noted agricultural work.

### Invitation to San Antonio

Those who take the southern route to Los Angeles are invited to stop off for a day in San Antonio, Texas. San Antonio is one of the oldest of American cities. It is rich in historical interest. Here the Battle of the Alamo was fought and the Alamo Mission in the heart of the city is a monument to those who died that Texas might be free.

San Antonio is now one of the largest military centers of the U.S. Armed Forces. Fort Sam Houston, Kelly Field, and Randolph Field, the West Point of the Air, are here. Thousands were trained for military duty in World Wars I and II, in these centers.

San Antonio's semi-tropical climate, its picturesque river with its many bridges, will be long remembered. It has an excellent system of free public schools in which vocational education has received the attention it merits. In addition to industrial arts shops in 10 Junior and Senior High Schools, San Antonio has three large vocational high schools, a large veterans training program, part-time and evening schools, an apprentice training program, and cooperative training programs which may be visited.

## TRIPS AND SPECIAL EVENTS

*Delegates who arrive in Los Angeles for the American Vocational Association Convention before Monday, December 15, may obtain a booklet describing trips and special events at the following places:*

Information Desk
Board of Education Office
451 North Hill Street

The Office
Frank Wiggins Trade School
1646 South Olive St.

*On Saturday and Sunday, December 13 and 14, these booklets may be obtained at*

Special Information Desk
The Galleria
The Biltmore Hotel (AVA Convention Headquarters)

# AMERICAN VOCATIONAL ASSOCIATION ANNUAL CONVENTION BANQUET

## EARL CARROLL THEATRE RESTAURANT

Sunset and Vine
Hollywood, California

**DECEMBER 17, 1947**
**Wednesday**
**6:30 P. M.**

**Don't miss an evening in glamorous Hollywood—at the justly famous *Earl Carroll Theatre Restaurant.* Here are 4 good reasons why you will want to be at the banquet—*The big event of the convention.***

### COUNT THEM

**ENTERTAINMENT**

*One of the best shows staged by the master showman—Earl Carroll—fifty of the most beautiful girls in the world—scores of acts—a thousand laughs—see a fine show on the largest double revolving stage in the world.*

**DANCING**

*Whether you rhumba, samba, or fox trot, you'll enjoy dancing to the music of Manny Strand's CBS Orchestra.*

**ATMOSPHERE**

*Relax in a comfortable chair at a reserved table. Your reservation gives you a full and unobstructed view of the stage.*

**CUISINE**

*Supervised by a nationally known chef—served in such an appetizing manner that your pleasures, gastronomically speaking, will be satisfied.*

*It's informal—it's inexpensive—it's important that you mail your reservations now—*

## TENTATIVE MENU

**Choice of One**

Antipaste Maison — Soup du Jour

Half Iced Cantaloupe

**Entrees**

Half Broiled Chicken, Colbert Butter

Baked Smithfield Ham with Raisin Sauce

Roast Young Tom Turkey, Stuffing and Current Jelly

Tenderloin of Beef Saute, Bordelaise

Fresh Vegetables — Potatoes

**Desserts**

Layer Cake — Sherbet — Ice Cream — Orange Ice

**Coffee**

**DINNER + DANCING + ENTERTAINMENT + TAX + TIP**

*Your ticket pays the whole bill*

**TO: CLIFFORD M. DAVIS, TREASURER**
**451 NORTH HILL STREET**
**LOS ANGELES 12, CALIFORNIA**

*Enclosed is $_____ for ____ tickets at $5.00 each for the AVA Banquet at Earl Carroll Theatre Restaurant in Hollywood on Wednesday, December 17, 1947, at 6:30 P. M.*

Name _____

Mailing Address _____

City _____ State _____

# *Experience* IN LIVING

## *Clara Barton Vocational School Relates Its Extra-Curricular Activities to the Outside World*

ANY school in a democracy must be concerned with individual boys and girls, with their needs, with their aptitudes, their recreational activities, and with their whole development. A vocational program of education that does not include this philosophy robs youth of its birthright.

The acquisition of a skill that enables youth to earn his living by the sweat of his brow is not enough to fit him to live in his community. He does not stop living at the end of his eight-hour work day and he must be educated to use his leisure so that it will be meaningful and satisfying. A combined program of academic, vocational, cultural, and avocational education must be provided.

At Clara Barton Vocational High School in Baltimore, the basis of the education program is teaching youth to live together. This program includes training and experience in the use of leisure time. A discussion of a few of the clubs will serve as an example of student activities.

There are 22 extra-curricular activities offered including the athletic activities. The interests of pupils are met whenever a group of 10 requests a special activity. Ten girls were thinking of establishing their own homes and wanted to learn the art of embroidery to decorate their linens. The work accomplished has been amazing. In addition, they have been taught to listen to worthwhile radio programs while they are developing this skill.

For the 85 girls who are interested in group singing the Glee Club is the answer. They sing at assemblies, at commencement, over local radio stations, at meetings of various civic organizations, and for charitable institutions. This activity has a definite "carry over" to work life because many businesses have well-organized Glee Clubs and Choruses. They also may join civic choral groups.

The Travel Club is organized to take a girl out of her community and to widen her horizon through experiencing what is to be found in her own city, state, and capitol. In May this group, and others who wished to join it, visited both the Capitol at Washington, D.C. and the state capitol at Annapolis, Md. Since this is "one world," education must widen the students' circle of contacts. The Travel Club creates a better understanding of places, things, and people.

The Camera Club takes all the pictures for the monthly school paper, *The Barton Torch*, and many for the yearbook, *The Barton Dial*. They go on trips throughout the city to take pictures, learn the "art" of taking a fine photograph and developing it.

A popular activity is the Arts and Crafts Club. Many attractive articles for hospital, personal, and home use are made, as well as favors for special holidays and articles for the Red Cross and U. S. Marine hospital.

Girls talented in art choose the Sketching Club and find interesting persons, streets, scenes or historical landmarks to sketch. They usually enter *The Evening Sun* contest for black and white sketches.

The Charm Club gives experience in "How, When, and Where" to do things which are socially acceptable. Standards of dress, make-up and social behavior are stressed, as well as etiquette.

Basketball, soft ball, archery, and volley ball are included in the physical education program, and Barton students compete with other high schools in these sports, but the Recreation Club was organized to de-

**The Arts and Crafts Club has interesting projects**

**EDNA M. ENGLE**
*Principal, Clara Barton Vocational High School*
*Baltimore, Maryland*

velop sports in which girls are apt to continue after leaving school. Bowling, ice skating, swimming, roller skating, table tennis, shuffle board, and badminton are activities for after work hours, in clubs, or during lunch hours. Many businesses encourage such activities for employees, and in asking for recommendations, they nearly always ask the extra-curricular interests of the students.

The Drivers' Club is one of the most recent organized. The aim is to teach pupils to observe the rules of safety both as drivers and as pedestrians. More girls want to join than can be accommodated.

For those who like to write, there are *The Barton Torch* and *The Barton Dial,* in which girls can find satisfaction as reporters, business managers, or as editorial writers. These publications stand well in their class having achieved first place in the Columbia Scholastic Press Association.

Students learn to "provide for a rainy day" by depositing in the School Bank every Thursday morning before school. The necessity of forming the habit of saving through insurance and savings banks is taught as a part of the mathematics and business courses, but it is "cold storage" information unless an opportunity is provided during school to form a systematic habit of saving. The emphasis is not on the amount of deposit, but the habit. More than 60 per cent of the students are regular depositors.

Intelligent leadership is a crying need in all levels of society. The Leadership Club assumes the responsibility of developing the right kind of leadership and the ability to choose the right leaders. Practical use of Parliamentary Procedure is experienced. Dependability is developed through assuming responsibility and carrying it through to its completion. For example, the group inspects the building for sanitation and cleanliness and seeks cooperation of the student body where evidence of carelessness is found. Poise and confidence are developed through speaking to homeroom classes and assemblies and initiative is developed.

The Public Speaking Club members preside at assemblies, take part in Junior Town Meeting of the Air, and speak outside of school. Once a semester they go to junior high schools to explain the program offered at Barton. They speak for the Red Cross, Community Fund, and PTA. Such experiences not only give practice in public speaking, but bring club girls into contact with leading citizens of the community.

A new activity this year is the United Nations' Youth Organization which has a large membership. This group is organized to foster understanding with other peoples. It works toward making youth receptive to changes and sincerely tolerant of other races, not patronizing. Recently one of Barton's girls went to New York to attend the *Herald-Tribune* Forum for high school students of the U. S., Canada, and South America. The theme was "The Americas in the World We Want." She gave a report at assembly upon her return and 10 students reported on the United Nations' Youth Organization dinner which they attended. Representatives from private, public, parochial, and colored high schools were present at the dinner meeting. Little if any prejudice was evidenced and the experience proved that personal contacts create better understandings.

**Feeding children in a local hospital, a community activity**

The Community Service Club is organized to teach Barton's girls their responsibility for giving service if they are to have the kind of community in which they want to live. At least once a week they give free service to hospitals, French Relief, Community Fund, Red Cross, the Seaman's Branch of the Y.M.C.A., and Overseas Relief. They are enthusiastic about this work and the club has grown in membership. Young people, through experience, are learning where they fit into the community, how the "teen-agers" can contribute to their community, and their responsibility for the kind of a community they want.

The Radio Workshop is very popular. Students broadcast programs about student activities over a local station. Once each year they participate in a program for the Junior Town Meeting of The Air. Their topic last year was, "Should Baltimore Have Daylight Saving?" Students try out for these broadcasts at school but the final selection is made at the radio station where they are given help and time to overcome "mike fright." One girl from the school was selected as announcer for the Junior Town Meeting of The Air International Broadcast on the topic, "How Can Family Life Be Improved." This club, as well as others, provides learning through experience.

Students' assemblies are an important phase of any vocational education program. A committee of teachers and students plans the year's program, including observance of special holidays, patriotic events, dramatic productions, presentation of glee club activities and student talent, musical assemblies and those at which speakers from many fields are guests. Here, standards, ideals, morale, school spirit, and outside contacts are the core of the program. A girl develops habits and attitudes as a member of an intelligent audience and has an opportunity to express herself through participation in her particular interest. Interest and appreciation are created in all trades that the school offers; the girl becomes conscious of belonging to a group with a common purpose; practice in public speaking before a large group is provided, and the girl sees herself as a part of the large school-community.

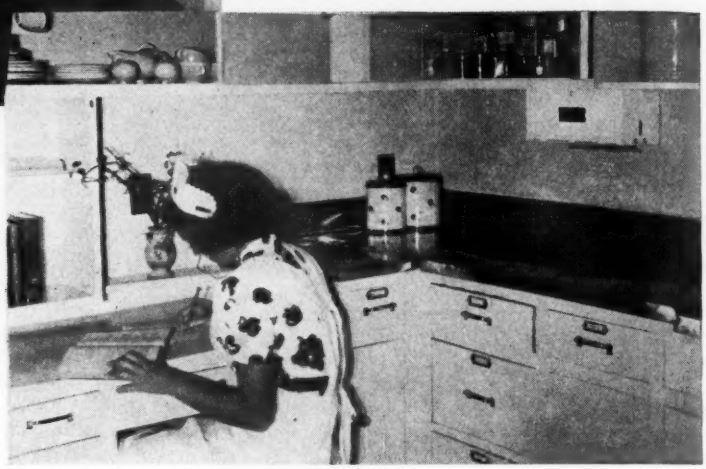
For the past five years, Barton has presented a series of assemblies for understanding other people. The students have become world-minded, are conscious of the interdependence of all nations, and that distances now are greatly reduced. In one assembly Turkey was discussed in Social Studies. A display of Turkish art and

*(Continued on page 28)*

# PLANNING H

**BOLETHA FROJEN**
State Supervisor of Home Economics Education
Florida

**Above — A front view of an electric unit kitchen at Miami Beach Senior High School homemaking department, Miami Beach, Fla.**



**Right — Each unit kitchen has a business area where records can be kept and work of a managerial nature can be worked out**

***EDITOR'S NOTE:*** One of the problems confronting home economics teachers has been that of carrying out an adequate homemaking program in an inadequate school environment. Miss Frojen here tells us of the excellent work carried out in Florida. G. H. F.

HOME economics staff members of the Florida State Department of Education increasingly are being called upon to assist local communities in planning new home economics departments, or in remodeling old inadequate and obsolete departments. Other state departments doubtless have the same experience.

Inadequate departments usually are the foods and clothing laboratory departments, which are not able to fulfill the purposes and philosophy of home economics education today.

Frequently it is the teacher who has kept abreast in the field of education for homemaking who finds the department inadequate for providing learning experiences in the many aspects of homemaking and home living included in the curriculum today. She may take the initiative in requesting help in remodeling the department. Sometimes it is the principal who has transferred from a school which had an adequate modern, and attractive department. Sometimes the county superintendent or a school board member has been inspired when visiting such departments. Sometimes the state department representative, on her official visit to the school, has suggested ways of remodeling the department to make it more functional. Such a suggestion may have resulted from her observation of the program and the department facilities as she confers with the home economics teacher, the principal, or county superintendent. Or she may have supplemented the verbal report with a written report on the findings, giving some recommendations.

Florida has tried many ways of reporting on school visitation. The present practice is to make a written report to be placed on file in the office for the coordinator of supervision to review and summarize for the state department, and only a letter is sent to the county superintendent. Many requests for assistance in planning home economics departments cooperatively with local persons have resulted from verbal or written reports of school visits.

Until recently the state department had a school architect on its staff in the school building division. This is a state service heartily recommended by the writer. The architect worked closely and cooperatively with the home economics education staff with profit to both departments and the local community. He followed through on the home economics staff members' recommendations, measured the space to be allotted to home economics (sometimes securing additional space), and drew a floor plan to scale (¼" to 1' is the easiest working scale) showing windows, doors, jutouts, flues, built-in permanent features, etc., that influenced the planning.

A home economics staff member then took the floor plan the architect had laid out and drew to scale the arrangement of equipment including the built-in and combination storage. Application of good principles of arrangement for management of activities, for convenience, for labor-saving, and for flexibility in use for different age and income level groups was made; the enrollment and number of classes, the multi-purpose uses of the department, and the type of community and its resources were considered. The plan was designed to approximate home situations so that

# HOMEMAKING DEPARTMENTS

## An Architect on the State Education Department's Staff is Most Valuable

the in-school learning experiences could relate more closely to the home.

The areas for learning experiences usually provided for in the department are foods, clothing, laundering, child care, social experiences, and home nursing. These may be provided in one room—an all-purpose home economics department—or each may be in separate connecting rooms, or in two or more rooms. This will depend upon the size of the program, the school, and the financial ability of the school board.

The foods room planned today has unit kitchens in V or L shape, or straight counter type, six or less in number. This again depends upon the size of the school and its financial condition and the enrollment.

The laundry unit may be combined with a unit kitchen or it may be a separate unit. Some other areas provided for either in a separate room or combination with another room, or in an all-purpose room, are home nursing and first aid, child care, and a workroom for crafts or shop work. The living-dining-reading-social area may be an end or a corner of the all-purpose room or it may occupy such space in the clothing-room or a two-room department, or it may be a room between and connecting by doors the foods and clothing room. Double doors between the living-dining-room and the clothing-room makes it more functional for large social groups by throwing the two en-suite.

After the plans are drawn to scale in pencil they are re-submitted to the school building division for "county financial ability" approval and sent to the local school personnel for review and for criticism. If possible, a state department representative goes to the community to discuss the proposed plan with local officials. In any case, changes may be made after plans are reviewed. The final plan is revised in the state department, including suggestions from all concerned, and are blueprinted in several copies. One is sent to the teacher, one to the principal, one to the county superintendent, one to the architect, and sometimes to an especially interested school board member. One or more copies are on file in the state department.

It is always well to accompany the plan with illustrations of built-in features such as unit kitchen designs, cabinet designs, and other storage and equipment features. It is desirable to give close supervision to the building of the department as it progresses, since the local architect frequently does not interpret the drawings as the draftsman intended. Sketched plans need to be carefully interpreted to the local architect and closely supervised, especially when such plans are drawn by home economics staff members who are not technically trained as draftsmen. Such supervision is not always possible in a large state, such as Florida, where a limited home economics staff of three persons supervises 350 schools.

The philosophy of homemaking education needs also to be interpreted to the architect and to local administrators. In the majority they are men and their understanding of the purpose of home economics education may be limited to practical skills in cooking and sewing, and to departments of the old type "science-patterned" laboratory.

The state department frequently is asked for stock plans. Each department must be planned for each individual situation, depending of the space, the kind of room or rooms, the exposure, the size and number of classes, the kind of a community, etc. Plans of other departments are helpful to see in order to give a suggestion of some like situation. Therefore it is desirable to have several copies of blueprints on file.

Learning experiences totally lacking in the early home economics departments are managerial, social, and relationship experiences, and the opportunity of securing these in a situation approximating a home. Therefore some kind of a living-room area should be provided. It may be only a reading area in a corner of the room with a book case, an easy chair, an end table, a floor lamp or other lamp, a lounge or a sofa or settee—any combination of furniture and furnishings grouped together for reading, for conferences, for entertaining a visitor, and to give the entire room the atmosphere of "home in school."

One and one-half classroom is the minimum length room for any home economics department room, whether that room is an "all purpose" room or a room for one of the purposes. Wider rooms than the traditional 22 feet are recommended for new departments.

**An alcove in the foods room, St. Petersburg, for storage**

**Room with old table and chairs which girls at St. Petersburg redecorated**

Centers of interest that are functional, pleasing, interesting, and inspiring in color combination exemplifying art principles are promoted for all home economics departments and all rooms in the department. It is intended that the ideas will carry over into the home and into other classrooms, or at least provide enjoyment.

There are many evidences that ideas do carry over into many homes. Frequently one useful and attractive feature in the home economics department will become an epidemic in the homes of the community. Teachers of elementary education have done much in creating, with pupils, centers or themes of interest. High school teachers need to be inspired to clean up, freshen up, brighten up, and give their rooms a "face lifting." For 12 years of their lives youngsters spend nine months a year in school. It is a general belief that the school, the home, and the church are the chief institutions in the lives of children. Too often the school is drab, uninteresting, smelly, unsightly, cold, without sufficient candlelight for proper eye coordination, inadequately and incorrectly equipped. When adults go to public places as hotels and other eating places and living quarters, they seek the well-equipped and most attractively furnished. The most precious and the most precarious individual in the family—the child—is sent to school every day with little thought or curiosity on the part of the parent or the unrelated taxpayer to investigate the kind of an environment the child lives in for the greater part of his 12 years, the formative years in physical, emotional, social, and mental development.

A goal in home economics is to inspire young people to good home and family living, skillful, intelligent, and enriched home living. Home economics departments should inspire and furnish the pattern in homemaking experiences as exemplified in the home economics department. However, more frequently than not the home economics department does not exemplify the first principle in good management of activities, in the application of art principles, in functional and attractive equipment, or in providing for learning experiences in many different phases of homemaking for a synchronized whole.

For example, a leadership conference for 248 selected school personnel from a cross section of the many categories of school personnel (such as principals, supervisors, and teachers from the fields of art, music, physical education, home economics, speech, science, English, etc.) has been held at Florida State University at West Campus (Dale Mabry Field—a depossessed Army camp) at Tallahassee this past summer. They have worked together as a group on a total school program with the chief emphasis on child growth and development, program planning, and evaluation. Demonstrations of centers of interest were given by committees from the home economics group. One converted the home economics room—a bare four wall room, an Army barracks with no equipment but a teacher's desk and chairs—into "Podunk Rural School" with four classrooms. A center of interest was created in each corner. One was a reading center, one corner carried out the Pan American Day theme, another the Seminole Indian theme, and the fourth a study of Norway. Articles typifying each were collected in the community to make each a real center of interest. Art principles were applied in color and arrangement. Participants from the entire campus called to see the room. A hostess was stationed in each room (corner), each in appropriate costume.

In any school, in any room, in any community, centers of interest can be created by pupils demonstrating a theme, an activity, an occasion, a holiday, or a purpose.

Pupils can work in groups or individually in creating these centers. They may bring things from home or call on other resources in the community or create a thing of beauty. A crayon or colored chalk drawing of the child's own expression on a piece of wrapping paper may be an object of interest or of beauty, to be placed on the bulletin board for a period of time. Centers of interest may be changed daily or weekly or monthly, after each has served its purpose.

An attractive, inspiring reading center should be a permanent place in every room.

Home economics teachers have a challenge in creating interesting centers in their own departments and in inspiring and helping other departments to also create centers of interest and beauty.

The girls' rest room is everybody's concern and becomes no one's responsibility. Demand that it be sanitary, well-kept, attractive and fresh.

Children should have schools that are colorful but in color combinations that are pleasing and restful (except in rooms where they should be exciting in color); schools that have modern facilities in equipment, furnishings, lighting, ventilation, and are sanitary and clean; schools permitting youth to develop to their optimum potentialities mentally, physically, emotionally, and socially. Then public taxes may be reduced, and funds used for other public institutions.

Can home economics departments contribute to such goals? Can home economics supervisors, teacher trainers, and teachers cooperatively with school administrators, patrons, and pupils effect, to a degree, the accomplishment of these goals?

# *Oklahoma FHA's 10th Birthday*

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State Adviser, FHA
Home Economics Education, Oklahoma

**MARGUERITE SCRUGGS**
Northwest District Supervisor
Home Economics Education, Oklahoma

OKLAHOMA'S 7,500 Future Homemakers of America celebrated their 10th birthday this year. Each month was filled with activities for the 198 affiliated chapters.

During the early fall last year, state and local executive committees were busy developing the year's program of work. State goals for 1946-47 included personal and home improvement, improved relationships, conservation and sharing, interpreting the club program to the community, and improving the organization of Future Homemakers. Members of each local club worked together in planning and carrying out activities pointed toward the accomplishment of these goals. Chapters worked together in carrying out 14 sub-district leadership conferences; neighborhood activities such as joint initiation-installation services, series of radio broadcasts, assembly programs and socials; and in observing Oklahama's first FHA Week, culminating in the first state rally since 1941.

Five thousand five hundred Future Homemakers, club mothers, homemaking teachers, school administrators, and interested friends attended the state rally in Oklahoma City March 28-29. This was the first state rally for many, and for some the first trip to Oklahoma City.

Happy, eager girls began arriving Friday afternoon and evening. They had their choice of a party or attending a Sigmund Romberg concert and about 900 attended each function.

The day's program started with a talent show at 8:30 a.m. Saturday in the Municipal Auditorium. Girls from 14 different chapters who presented the numbers found it exciting to appear before a microphone in a spot light, before an audience of thousands.

State President Rosemary Phillips, Lawton, presided at the general program and section meetings were held in the afternoon. Senior high girls heard discussions of careers in home economics by representatives of various fields in home economics as well as reports from a junior high member, a national officer, and a past state president. In the junior high section meeting, four different chapters gave reports of activities and projects for the year. Club mothers, homemaking teachers, administrators, and bus drivers also attended section meetings. Highlights included music by the Oklahoma City University Choir, Y.M.C.A. Boys Chorus, music by radio artists, and numbers by girls from Puerto Rico and Guatemala. Stores, broadcasting stations, flower shops, the art center, leading cafes and cafeterias, and the state capitol were visited.

Definite responsibilities for the day's activities were assumed by 112 chapters. This involved participation on the part of more than 2,000.

To make it a learning experience, "getting ready for the rally" was the local chapter theme for the month of March. Members planned their activities, budgeting their time and the money they had earned for the trip. Local chapters studied and discussed proper clothes, socially acceptable behavior, and each person's part in helping to make the event a success. The special edition of the state newsletter offered suggestions for the occasion.

Participation in many local and state projects during the year helped prepare the Future Homemakers for the responsibilities they assumed. Approximately 1200 officers attended 14 leadership conferences in the fall. Most of the girls contributed to Home Economics Day activities on November 14. Through displays, assembly programs, broadcasts, news articles, and socials, chapter members showed friends and parents "what we are learning in homemaking classes," and "what the FHA organization means."

Chapters participated in the World Christmas Festival, and the March of Dimes project.

March 24-29 was proclaimed Future Homemakers Week by Governor Roy J. Turner. Each member endeavored to become better informed about her organization, to share this information with her family and friends, and to evaluate her own progress in light of the purposes of Future Homemakers.

Following the rally, local chapters sent in suggestions for the program of work for 1947-48. With the help of some of the club councilors, the retiring and incoming state officers studied these suggestions and developed the program of work for the year 1947-48.

**Yukon FHA President serves the school superintendent punch**

# "FLYING CLASSROOMS"

## *Michigan Educators Confer With Leaders in Business, Industry, Management on Task of Schools*

"THE entire economic structure of our country depends upon a sympathetic understanding between labor and management working together toward a goal of high individual and group productivity. The destinies of management and labor are not separate entities, but they are closely linked together in a common cause of full production. If the schools of America can teach young people this basic economic truth, they will have achieved the most important contribution toward the economic stability of this country that they ever have made."

Senator Arthur H. Vandenberg, senior senator from Michigan, was speaking to a group of Michigan educators who, with leaders in management and labor, sought to determine the role of the schools in reaching solutions to today's economic crises.

To the 23 Michigan superintendents and principals, flying in new DC-6 planes at 18,000 feet and over 300 miles an hour, was part of the educational experience.

This is the third year that a group of Michigan schoolmen has made studies of their problems in off-campus courses. Michigan State College sponsors the field studies in cooperation with the Department of Public Instruction. Eight term hour credits are given, and local boards of education pay the expenses of the members of the Flying Classroom.

The following organizations were visited this year:

Detroit—Chrysler Corp., General Motors Corp., Michigan Bell Telephone Co., Ford Motor Co., A & P Tea Co., J. L. Hudson Co. Chicago—International Harvester Co., Science Research Associates and the University of Chicago, Institute of Industrial Research. Washington—U.S. Office of Education, U.S. Chamber of Commerce, U.S. Agricultural Experiment Station, C.I.O. and A.F. of L. headquarters. Philadelphia—RCA, Curtis Publishing Co., Opinion Research Corp. (Princeton). New York—NBC, Bell Telephone Laboratories, Inc., Time, Life & Fortune Magazines, National Association of Manufacturers, Metropolitan Life Insurance Co., American Airlines, Air Age Research, Yale University.

One of the major benefits received was the opportunity of discussing vital questions concerning American education with the following leaders:

B. E. Hutchinson, vice-president, Chrysler Corp.; C. E. Wilson, president, General Motors Corp.; Oscar Webber, vice-president and general manager, J. L. Hudson Co.; T. N. Lacy, president, Michigan Bell Telephone Co.; Fowler McCormick, chairman of the Board, International Harvester Co.; Dr. George Gallup, Institute of Public Opinion; Dr. Claude M. Robinson, Opinion Research Corp.; Dr. Emerson Schmidt, U. S. Chamber of Commerce; Kermitt Eby, educational director, C.I.O.; Miss Thorne, director of Research, A. F. of L.; Senators Arthur Vandenburg and Homer Ferguson; Walter Fuller, president, Curtis Publishing Co.; Fred Wilson, vice-president, RCA; Henry Luce, editor, Time, Life and Fortune; Holcombe Parkes, vice-president, NAM.

In the field of free enterprise, labor and management, the leaders of both management and labor were asked certain questions. Some of the answers follow.

What is free enterprise?

It is a term used to express the economic system of the American way of life. It is a condition under which there is freedom of competition; the opposite of Socialism, Naziism, Facism, and Communism.

Should the schools teach about free enterprise, labor, and management?

The question carries with it the connotated meaning —*dare* the schools teach about free enterprise, labor, and management? Leaders agreed that they should dare —in fact *must* teach the facts.

Who should teach about free enterprise, labor, and management?

It was generally agreed that the major responsibility must rest with the teacher, and for that reason he must be academically honest and be selected on the basis of intellectual ability and judgment. He must be well schooled in the basic facts to be taught, be able to think impartially and impart to students the ability to recognize the truth and reason accordingly.

What should be taught about free enterprise, labor, and management?

The answer was (a) the facts about capital, management, labor, overhead, stockholders, and profits; (b) that conspiracy (monopolies) and fraud (illegal merchandise) have no place in the American free enterprise system.

What about the history of the free enterprise system?

A comparison of the economic success of this country with that of other forms of government would show that no system can outproduce the American system if the initiative of all can be harnessed.

What about the history of the labor movement?

This should include the origin of the early trade guilds and their relation to present labor organizations. Consideration should be given to the stated policies and objectives of present day unions.

What are the areas of agreement?

Management and labor agree on 90 per cent of the basic issues. The schools should assume a positive approach in their teaching.

What about the merit system?

It was generally agreed that youth should see the relationship of the merit system to the free enterprise system. There was also agreement that a system of upgrading within the company on the basis of merit is most successful when accompanied by a company training program, on-the-job training, apprenticeship, and special extension courses conducted by the industry or in cooperation with schools and colleges.

In presentations of histories of business firms and industries visited, the educators were impressed by the fact that in the majority of cases the founders and those now in positions of responsibility came from humble beginnings and worked their way up from the ranks. Many of these stories are in print.

The formation of correct attitudes was called the responsibility of education. Students should be taught to respect facts. They should learn to make their own

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**and**

**CLAUD A. BOSWORTH**
*Director of Vocational Education*
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**Michigan educators arriving at LaGuardia Field, N. Y., and DC-6 Flagship "Michigan"**

decisions on the basis of truth, appreciate that to receive they must produce. Public education must further the growth of these attitudes.

Discussing the techniques that might be used in teaching about free enterprise, labor, and management, the following were suggested:

1. Industry and the schools should cooperate in the development of teaching materials. A willingness was expressed on the part of industry not only to work with education in the development of suitable teaching materials, but also to finance the publication and distribution of materials when completed.
2. Students and teachers should visit industry and leaders in industry should visit schools. A "Business Education Day" should be set up to this end.
3. Encourage free competition of ideas. Current publications should be examined for usable materials.
4. Invite the family in to see "Dad" work.
5. School libraries should contain literature issued by both labor and management groups.
6. Summer workshops should be established to provide teachers with the background and techniques for teaching the subject.
7. Essays, speech contests, and public forums sponsored by industry.

Michigan educators sought answers to the question: "What are the implications from research for education?" They learned that one and one-half billion dollars are being spent each year in this country in technological research, the objective usually being to produce better products and market them at lower prices. Much greater attention is being given to the opinions of employees, consumers, and citizens. The science of opinion polling has been developed to meet this need.

It was apparent that business and industry realize they need to know more about human relations. One executive said: "No company in the United State can claim competency in human relations."

Facts revealed by Air Age Education Research point to many changes needed in education. A new business, air cargo, grew 750 per cent in six months. With London only seven hours and Russia nine hours away by plane, the increase in travel between all countries creates problems of language, business and industrial competition, and human relations that present day education is not solving.

Doing a good job of educating does not provide the public relations program that is needed, the educators were told. Business and industry spend millions on public education; are willing to cooperate with the schools by making statements regarding school problems, campaigning for better school buildings and teachers' salaries.

Organized labor increasingly is showing its desire for better educational facilities by giving support to educational bills and helping to pass bond issues for schools.

Conclusions and recommendations follow:

1. Business, industry, labor, and education must get acquainted with one another and work cooperatively if the great problems of the atomic age are to be solved.
2. Educators must build the first span across the gap between business, industry, and education. Field studies such as the Flying Classroom should be a part of the educational program in every state.
3. Vocational education must change to meet the needs of a rapidly changing business and industrial world. Basic understandings of economics, production, distribution, laws, organized labor, and human relations must be given much more time and attention in vocational education. This means that in addition to machine and other skill training, other broad basic training must be provided for those entering industry.
4. Youth must be taught that work is a part of life not just a means to and end. The development of right attitudes toward home, school, country, government, associates, work, and the American Way of Life must replace some of the old curricular materials.
5. An organized public relations program should be provided in every school.
6. Most troubles and even wars grow out of poor human relations. Youth fail and leave school, employees strike, crimes are committed, and nations try to destroy other nations because youth are not taught the importance of, and how to develop, good human relations.

A few simple techniques which may be helpful to schools seeking a new and better educational program were suggested. (1) Public opinion polls can be conducted by students. (2) The faculty should spend one day each year with business and industry. Over 100 Michigan schools will participate in such an in-service training program this year, and M.S.C. will soon have a pamphlet on "How to Conduct a Business, Industry, Education Day." (3) Every state should develop Flying Classrooms to give educators an opportunity to study the world and its problems. (4) Advisory committees composed of public relations consultants from business and industry should be established by every city school system. (5) Schools must teach the facts about free enterprise, labor and management, and

*(Continued on page 37)*

## Develop Ability of the Trade Student to Think Through the

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# CONFERENCE METHOD

IT HAS been said that a good conference is worth 20 good lectures in obtaining improvement in employee performance. Just how good a lecture may be (as far as teaching is concerned) is a moot question and most teachers of trade subjects consider other methods of teaching to be far superior. The conference method of instructing employees has proved valuable in industry and may be used effectively for teaching in the trade school.

There is a feeling that the group receiving instruction through the conference method must have a considerable background of knowledge in the subject discussed. The question seems to be whether students of secondary school age have this necessary background. If the group does not have some background of knowledge, it will be impossible for them to learn through any method of teaching, because people gain new knowledge through knowledge already possessed. This old knowledge must be the background upon which to build.

ACCEPT the fact that students have considerable background and embark upon the most interesting and fruitful teaching method that may be used! Teachers may have to learn a new technique in order to carry through the conference successfully. Those whose experience has been that of the classroom lecturer frequently find it difficult to lead a conference successfully. It will be difficult to remain quiet while a hesitant student tries to express his ideas upon a subject. The first thing an instructor must learn in conducting a conference is to refrain from expressing his ideas; in fact, refrain from raising an eyebrow or otherwise indicating ideas by facial expressions. A conference leader who uses more than 25 per cent of the conference time in expressing his ideas is not doing a good job. Limit talking to 15 or 20 per cent of the time. In this limited time make every word count; learn to say a great deal in a very few words.

The art of questioning comes to the fore in conference leading and "why" and "how" frequently spell the difference between a successful conference and failure. In using the conference method in teaching, follow the old teaching steps of *Preparation, Presentation, Application,* and *Testing,* with possibly a few modifications. The *Preparation* step always was building up of a background of ideas or understandings which guided thinking into the channels leading to the point of departure.

The preparation step always was building up a background of ideas and understandings which might be used to stimulate thinking in the desired direction. This discussion of background understandings should also serve to build up the student's confidence in his ability to think. It is wise to help the student bring out and discuss these understandings and ideas so they may be further checked and clarified.

The *Presentation* step might be modified into drawing out; or, if ideas must be presented they may be presented by members of the conference other than the leader.

AT THIS point it becomes necessary to have black board work organized so that the ideas may be systematically recorded. Care must be taken to arrive at definite conclusions. It is disastrous to leave a conference hanging in the air without working out answers to problems. Many different headings may be used, but the simple listing of reasons for and against a procedure aids greatly in getting thinking organized. The main objective of all teaching is to get people of all ages to think. The instructor who is able to guide the workings of the minds of a group of people so that they arrive at desired conclusions has accomplished the results that educators always have sought. It frequently is found that the understandings of one student will help greatly in developing the understandings of another. Interests are contagious and there must be interest and ideals before understandings can be developed. From understandings to abilities or skills is a short step.

In the *Application* step the student or conference member gets an opportunity to apply his understanding in discussion with fellow students. Although many people believe that hand skills or manipulation abilities are abilities of the hands alone, that is not true. The mind must think all processes through before the hand is able to carry out the work. Many times teachers emphasize the thing that is to be produced instead of the ability to produce which should be the goal of the student. The ability to understand and think through the problem is so much more important than any other phase of teaching that it seems unbelievable that teachers could possibly miss it.

THE *Testing* step in trade teaching usually is a simple and easy one as it is merely finding out if the student can do the job. Unfortunately it is possible to do certain jobs without understanding thoroughly what is being done. Where teachers of trade and industrial subjects (and all other teachers) show a weakness is in teaching students to think. They are so careful in their use of a costly machine tool and so careless in development of the most valuable thing in existence—a student's mind! That development can be enhanced through the conference method of teaching.

**ETHYL DAHLER**
*Coordinator, Adult Homemaking*
*Fargo, North Dakota*

# Trailer Town and Down Town Groups Study HOMEMAKING

LIKE many other college towns, Fargo, North Dakota, now has its own Trailer Town. This population of approximately 400 consists of young married couples, many lacking home and family experiences, with low incomes in a high-cost-of-living world, limited living facilities, and the added responsibility of a third or fourth member in the family. Like many similar groups in college towns from coast to coast, these young people are the roots of American homes and family living of tomorrow. Thorough planning to meet their special needs must be the first step in sowing good seed for a future harvest.

The Fargo adult homemaking education program was broadened to meet the situation. The 1947 objectives were two-fold: to meet the needs and interests of the more permanent population of the city, and to serve this temporary and somewhat transient group on the campus of North Dakota Agricultural College.

It has not been a difficult task. It seemed wise to integrate the young homemakers with the normal, settled group of local people as far as possible, thus giving them a feeling of belonging to Fargo. Many of the classes which interested them were held on the campus, for convenience sake. These included a Supper Club in which the women met and planned well-balanced meals, learned new and simple cooking methods, and social graces. On alternate weeks they prepared and served the meal to husbands and children. This has led to many outside social groups.

Meal planning and preparation on a long-time plan followed. Other classes geared for the campus families were on prenatal and infant care, training the toddler, children's clothing, home improvement workshop, and a sewing and mending clinic to give trailer wives access to the college Home Economics department's sewing machines.

In addition to the regularly scheduled classes, workshops, and clinics, consultant service has been arranged which solves many individual problems.

For the "down town group," the program is varied and geared to the needs and interests of more experienced homemakers. Records show that the greatest demands are in the areas of dollar-saving classes such as upholstery, slip-covering, furniture finishing and repairing, lamp shade making, handcraft, and clothing construction, both at beginning and intermediate levels, and tailoring. People are more or less "sold" on some areas, but must be gradually introduced to others. A trend toward classes in self-improvement for the young business and professional woman, a homemakers reading group, adolescent problems for parents of teen-agers, and house planing are courses now being requested. Foods and nutrition which during the war was almost overworked, except on the social basis, have not been in such great demand. Canning and gardening projects have been of continued interest, however.

Years of contact and experience in the community are required to know what adults need and to plan adequately. Interests can be found through surveys or questionnaires, and through group expression.

Teachers for adult classes must be qualified not only in their specific area but in their approach to grown-ups. Many of the best trained adult education teachers are too busy with other obligations to add another activity. The budget for adult work is not always extensive and it is difficult to pay for the time teachers must spend in planning and preparing for classes. The teacher often grows as much as the pupils in these classes, especially where good ideas are pooled by all present—which always proves the most satisfactory class, and is the one asked for the next term.

Adult homemaking belongs to the community and it takes the combined efforts of many organizations to see a program through. In Fargo, the Y.W.C.A., Y.M.C.A., Red Cross, PTA, Chamber of Commerce, Public Library, North Dakota Agricultural College, State Department of Public Welfare, State Board of Health, Public Health Department of Fargo, the Fargo Forum, Radio Station WDAY, the public schools and the churches have helped make the program function. Without the combined efforts of these agencies, a total of 39 courses, clinics, and workshops could not have been given during the first seven months of the plan.

**Adult homemaking classes in Fargo, North Dakota, are teaching women to make lampshades, tailoring, and repair of furniture**

# He's Looking into Your Fu

The scientist in the agricultural laboratory is as truly a pioneer as our grandfathers who fought their way westward to the rich farmlands and the broad ranges of the west. He's looking into your future . . . seeing greater things! His findings, put to use by practical livestock men and farmers, are resulting in thriftier, faster-gaining cattle and lambs, grazing the Great Plains . . . higher yielding crops enriching the Corn Belt . . . new immunity from disease for your livestock. He is pioneering a better and more abundant life for you through new markets for your output, improved products for you to sell.

Miracles like hybrid corn seldom happen by chance. Into its development went more than 30 years of patient research. It cost federal and state governments about ten million dollars. Experiments on individual farms cost unknown amounts. But last year alone hybrid corn added more than $750,000,000 to farm income. Thanks to research, we now have such chemicals as DDT. Chemists searching for an insecticide to protect our armed forces from malarial mosquitoes found this potent bug killer. Already, DDT has made livestock producers many extra millions through increased production of meat and milk from fly-free herds. One ranch reports an extra ton of beef for every pound of DDT used. What a return on a half-dollar investment!

There are similar thrilling stories being written in every phase of agriculture. Many of the new developments come from colleges and experiment stations (largely financed by taxes paid by individuals and business) or from laboratories supported by private industry. From them you get improved varieties of crops, better control of pests, parasites and diseases, and many another aid to production. The man who keeps abreast of scientific progress and applies it on his farm or ranch usually profits most. Your county agent, vocational agricultural teachers and farm and ranch publications are your helpers to keep you abreast of latest research information.

Swift & Company, for many years, has engaged in extensive research on agricultural products. It enables us to develop new products; to improve existing ones; *to produce better nourishment for your family, your livestock and your crops.*

**Soda Bill Sez:** . . . *little grains of sense can produce a big harvest of dollars.*
. . . *take a good look at America—and be thankful!*

**OUR CITY COUSIN**

Old Tom heard City Cousin say—
"What a meal for our Thanksgiving day!"

## Track Down the Facts

Old Ringtail, the racoon, holes up in hollow trees. He's hard to track down without trained 'coon dogs . . . similarly, there are some hard-to-locate facts about any business. But no one needs any special "fact hunting" ability to get all the facts about what determines livestock prices.

A recent top price for beef steers on a midwest market was $35, with an average of near $30; best lambs, $23.50, average $23, and hogs were selling up to $30, with a $27 average. These prices for livestock are unusual but, in general, they are due to the demand for meats being greater than the supply. They reflect what the consumer is willing and able to pay for meats. All farmers and ranchers should remember these basic facts, whether prices are high or low. The price producers receive for their livestock is governed by what the packer can get for the meat and the by-products.

## Soft Corn Fattens Livestock

*I. B. Johnson*

**by I. B. Johnson**
**South Dakota State College**

Soft, moldy corn has been fed successfully and profitably in each of three years to fattening cattle, hogs and sheep at the South Dakota Agricultural Experiment Station. This corn gave the greatest returns when fed during the winter as compared with spring and summer feeding. The gains per bushel were reduced after the beginning of warmer weather in April. The soft ear corn had the following approximate values when compared with No. 3 ear corn in the rations fed during the winter months: 82% when fed to yearling steers; 78% when fed to yearling lambs; 76% when fed to hogs and feeder calves.

The soft, moldy corn was palatable to cattle and sheep. When soft and hard corn were offered in separate bunks to other cattle on feed in 1943, the soft corn was always the first to be consumed. The lambs fed soft ear corn usually cleaned their feed bunks more rapidly than those getting hard ear corn.

The soft corn was fed without any special preparation such as drying, salting, shelling, crushing or grinding. It was stored in uncovered piles on the ground and fed field run. When broken ear soft corn was fed to cattle and sheep, wastage was reduced. Shelled soft corn and ground soft ear corn were eaten readily, but were difficult to store as they heated and further molds developed.

Studies made on soft corn piled on the ground in eastern South Dakota indicate that it can be so stored only during the winter months. If the amount of soft corn is greater than that which can be fed before the beginning of warm weather, it should be stored in narrow cribs to allow it to dry out rapidly with the coming of spring. Another desirable practice is to make it into silage by running the soft ear through the ensilage cutter.

If you want additional information, write the Animal Husbandry Department, South Dakota State College, Brookings, South Dakota.

**Swift & Company** UNION STOCK YARDS CHICAGO 9, ILLINOIS

# Future

## *Martha Logan's Recipe for*
## TURKEY A LA KING

(Yield: 6 Servings)

| | |
|---|---|
| 2 cups diced cooked turkey | 1 cup sliced mushrooms |
| ¼ cup butter | 2 tablespoons butter |
| 4 tablespoons flour | 3 tablespoons chopped pimento |
| 2 cups top milk | 2 egg yolks |
| 1 teaspoon salt | buttered toast |
| ⅓ cup chopped green pepper | |

Make a white sauce of the butter, flour, milk, and salt. Sauté green pepper and mushrooms in the two tablespoons of butter. Add green pepper, mushrooms, pimento, and turkey to sauce. Heat slowly five minutes. Stir to prevent burning. Stir in beaten egg yolks. Serve on buttered toast.

## Health and Wealth—
## By-Products of By-Products

Adrenalin, thyroxin and insulin are important to the medical profession and are closely related to the livestock-meat industry. These are only three of a long list of such materials derived from livestock. Adrenalin, extracted from the adrenal glands, is used as a heart stimulant and as a blood-clotting agent to help prevent severe bleeding. Insulin, vital in the relief of diabetes, and pancreatin, which helps digestion, are obtained from pancreas glands.

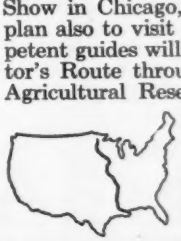
Thyroxin, a drug extracted from the thyroid glands of meat animals, is used to treat thyroid disturbances. Surgeons use lamb gut for sutures to close incisions and for tying off blood vessels. In fact, many other medicinal preparations are made today from what were formerly wasted portions of meat animals.

Saving these by-products is a service to the people who need these medicines. It is a service also to livestock producers, because it adds to the sales value of their animals. *But*, it requires the adrenal glands of 25,000 cattle to produce one pound of pure extract. Swift & Company handles enough meat animals so as to make possible the greatest use of these glands, and return to producers relatively higher prices for their livestock.

## From the Editor's Notebook

Since the days of the Pilgrim fathers, Thanksgiving has been a heart-warming day for American families. This year we, more than any other nation, have cause to be thankful for an abundant harvest. In helping to feed America, we are thankful that we can add *our* efforts to those of the hardworking farm and ranch families who produce our food.

If you plan to visit the International Livestock Show in Chicago, November 29 to December 6, plan also to visit us at Swift & Company. Competent guides will gladly show you along the Visitor's Route through our plant. All of us in the Agricultural Research Department cordially invite you to drop in for a chat. *We'll be looking for you!*



Producers who attend the International Livestock Show, particularly those who come in from distant points, will quickly realize why the livestock-meat industry *needs* nationwide meat packers, like Swift & Company. Two-thirds of the nation's livestock is produced west of the Mississippi River, but two-thirds of the meat is eaten east of the Mississippi. This means that, on the average, there is a gap of more than 1,000 miles between major producing areas and major consuming centers. There has to be somebody to bring the producer and the consumer together. Helping to bridge that gap between the western range and the kitchen range efficiently and economically is one of the chief services performed by Swift.

F. M. Simpson.

Agricultural Research Department

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# Training for the CHRISTMAS RUSH


**RALPH HARRISON**
*Coordinator, Distributive Education*
*Springfield, Missouri*


EACH year at Christmas time the Senior High School is called upon by business men of Springfield for extra help to take care of the Christmas rush. Students know this and call at the coordinator's offices and fill out application blanks for these Christmas jobs. Other students are notified through the school daily bulletin.

There are four coordinators in this school. As soon as applications are in, a meeting is called of all candidates for jobs and they are informed of the time and place for pre-employment classes.

The group is divided into four classes and each coordinator has a class. They are held before school starts in the morning and run two weeks, being well started three weeks before Christmas. Most jobs start one, two, or at most three weeks before Christmas.

It is in these classes that coordinators become acquainted with job applicants and try to match job with student. Through the cordinators' work, the personality traits business men want, become known.

When a worker is needed for two or three weeks, two students are put on the job, so they may work and go to school on alternate days. No school schedules are changed, but students must make up work that is missed. In the case of industrial arts, that work is made up after the student returns to school after the Christmas holidays. The coordinators place and train the students, who check out for work through the deans.

There is a ratio of five girls to one boy in the program, and the call for students to work is also five to one.

Pre-employment classes emphasize the personal-social traits required for success in the retail trades. Some of the points emphasized are honesty, loyalty, tactfulness, poise, courtesy (a special emphasis on this), cleanliness, pleasing appearance, cooperation, intelligence, the steps in a sale, and types of customers.

Simple things which students must find out when going to a new job are the time for the lunch hour, location of wash rooms, locker rooms, etc., rules for making change, how to answer the telephone, how to keep busy on the job, importance of not visiting on the job, etc. Since coordinators generally know the policies of the stores where extra Christmas help is needed, they can teach the general store policies of each, such as what to do with exchanges, how to apply for credit. The store then can give the specific information in addition to that which is also given in the steps of selling.

It is possible in pre-employment classes to train students for almost any type of retailing business. The usual department store jobs, drug stores, hardware stores, gift shops, toy shops, record shops, stationary stores, etc., are stressed since these are the places where there is greatest demand for student assistants. The same merchants usually request student helpers year after year, and each year sees some newcomers.

Does the program work?

One large store manager said: "This is the best group of extra sales help I have ever had. It is amazing the intelligent way they handle customers."

# Supervisory Training IN SACRAMENTO

**ISABEL CHEESMAN**
*Teacher Coordinator, Distributive Education*
*Adult Division, Sacramento College, California*

THE Bureau of Business Education, California State Department of Education, recognized the adaptability of Job Instructor Training, Job Relations Training, and Job Methods Training programs in the distributive field when these programs first were introduced.

The distributive educators of California held special institutes for training instructors and faithfully followed the pattern set in the TWI courses. As in any such program, additional needs were discovered. Mrs. Frances Torbert of San Diego gave a most necessary and desirable additional unit on "The Job Performance Interview" to the JRT course.

Sacramento was fortunate in working with progressive leaders. Three leading department stores took J.I.T. and J.R.T. training. Sacramento banks presented the course under the sponsorship of the local A.I.B. before they organized and trained their own instructors; the U.S.E.S. was served before their own staff was available, and the Delta Division of the U. S. Bureau of Reclamation has had two groups of J.R.T.

The importance and desirability of starting these courses as high as possible in the supervisory staff is more and more apparent. Where top-flight management has taken a course, they realize the practical use of the program in improving employee efficiency; then they are sympathetic with managers who are putting their principles to use, and active in the follow-up steps necessary to see that all managers and supervisors practice what they preach.

Some of the faith and zeal of the missionary spirit is essential to the successful instructor, and word of mouth testimony is the best way of interesting additional business firms and organizations.

One of the most successful programs started that way. The California-Western States Life Insurance Co. decided to take all three courses. President O. J. Lacy and every department head took the training. They then organized groups for their assistants, and spoke so highly of it that Borden's Capital Dairy Co. enrolled managers and department heads in the courses given for that company.

Other satisfying developments resulted. California-Western States was one of the first, if not the first large insurance company to use all three courses for their home office staff, and adapted it to their field training program. After weeks of rehearsal, they presented it to their agency managers as the teaching method for training agents. It has become a part of their established program, and they presented it at the Life Insurance Agency Management Association's annual meeting where top-ranking insurance companies in the U. S. were represented by their top executives interested in training. Thus the foundation was laid for more supervisory training. By starting at the top, Distributive Education can help see that supervisors get help with training, and in an atmosphere of mutual understanding and accomplishment.

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# *Who Will Succeed?*

**M. H. PANCOST**
Principal, Technical High School
Lansing, Michigan

EVERY vocational administrator sooner or later becomes aware of problems relating to admission of students to occupational trade courses. A variety of entrance requirements have been used by schools throughout the country in an attempt to admit only those who can profit from such training. Some schools depend upon intelligence quotients; others use a battery of aptitude tests; some admit all for a tryout.

When the Lansing Technical High School (Michigan) was opened in 1943 a study of the characteristics of the students entering was begun, in the hope that some test or tests could be found that would indicate probability of success or failure in occupational training. Since the I.Q. might reasonably be expected to be among the tests, and because teachers attach considerable importance to the I.Q., these were checked against school shop success with several groups of pupils. Tests of mechanical aptitude or adaptability selected by the director of guidance and placement (who has taken an active part in providing tests and interpreting results) also have been tried.

The latest and most comprehensive experiment was with the group entering the Technical High School in January, 1947. In addition to a mental maturity (I.Q.) test, pupils were given two mechanical adaptability tests and personality test. The criteria for success or non-success was the mark received in the vocational half day of shop. Marks received in related or general subjects were not considered. The results are shown in Table I below. The only tests showing appreciable differentiation between successful and unsuccessful pupils was the personality test.

TABLE I

| | I.Q. | | Aptitude Test A Percentile | | Aptitude Test B Percentile | | Combined Aptitude Percentile | | Self Adjustment Percentile | | Social Adjustment Percentile | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | U | S | U | S | U | S | U | S | U | S | U |
| Max. | 114 | 114 | 100 | 97 | 60 | 92 | 77 | 91 | 95 | 75 | 95 | 79 |
| Mean | 98 | 96 | 70 | 65 | 27 | 33 | 48 | 49 | 43 | 42 | 49 | 23 |
| Min. | 82 | 81 | 22 | 10 | 2 | 10 | 20 | 14 | 5 | 10 | 5 | 5 |

S—12 pupils receiving "B" in shop.
U—15 pupils receiving "D" or "E" in shop.

Because of the remarkable agreement between the I.Q. of the successful and unsuccessful pupils, it was decided to "run the cards" of all pupils who had been in the school for one or more semesters to see if this relation held in general. Table II indicates that it does.

TABLE II

| | *I.Q. of Successful* | *I.Q. of Unsuccessful* |
|---|---|---|
| Maximum | 125 | 116 |
| Mean | 101 | 97 |
| Minimum | 73 | 72 |

The I.Q. for the successful students were based on 105 pupils with a shop mark of "C plus" or higher. Those for the unsuccessful were based on 30 pupils with a shop mark of "D" or lower. "C" represents about half the pupils in the middle group.

Because of the negative nature of the results obtained, the school would be interested in learning of any measures used by other schools which have been proved valid in the selection of candidates.

*The Time:* December 15-18, 1947

*The Place:* LOS ANGELES, CALIFORNIA

*The Occasion:* Convention of the American Vocational Association, Inc.

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ALCOA FIRST IN ALUMINUM


# China Has Vocational ASSOCIATION


**C. J. HO**

*Associate Director*
*National Association of Vocational Education of China*


THE National Association of Vocational Education of China was founded in 1917 by leading educators and industrialists in the country for the purpose of preparing the individual for livelihood and social service and increasing the productiveness of society and the nation.

The work of the Association has been in research and experimentation. In the research field the Association has made surveys of vocational education and various occupations; it has collected materials for vocational schools, translated psychological tests for vocational aptitudes, and has made studies of special problems. More than 250 research studies have been published, either in the Association's journal, *Education and Vocation,* or in books and pamphlets.

The Association's earliest experimental unit, the Chung Hua Vocational School, was established in 1918. It offers courses in mechanical engineering, industrial chemistry, and business. It has an enrollment of more than 1,000 students in junior and senior secondary levels. It has graduated 4,000 students.

A little younger than the Vocational School is the Vocational Guidance Bureau, founded in 1927. It offers counsel on vocational and educational problems and does placement work. On the average, there are 500 applicants for jobs per month and the Bureau places about 15 per cent of them. Lack of training on the part of applicants accounts in large measure for this record and indicates the need for expansion of the Association's training work.

For advanced vocational training, a two-year college of business and engineering is operated by the Association.

A rehabilitation service recently was organized to give counseling, training, and placement to the handicapped in cooperation with existing medical, social, and other education agencies.

Membership of the Association includes 149 industrial and educational organizations and 2,512 individuals. It is planned to expand research work, to develop and improve vocational materials and techniques, and to introduce here new principles and practices from other countries with a view to constant improvement of the Association's schools and placement services.

## *Experience*

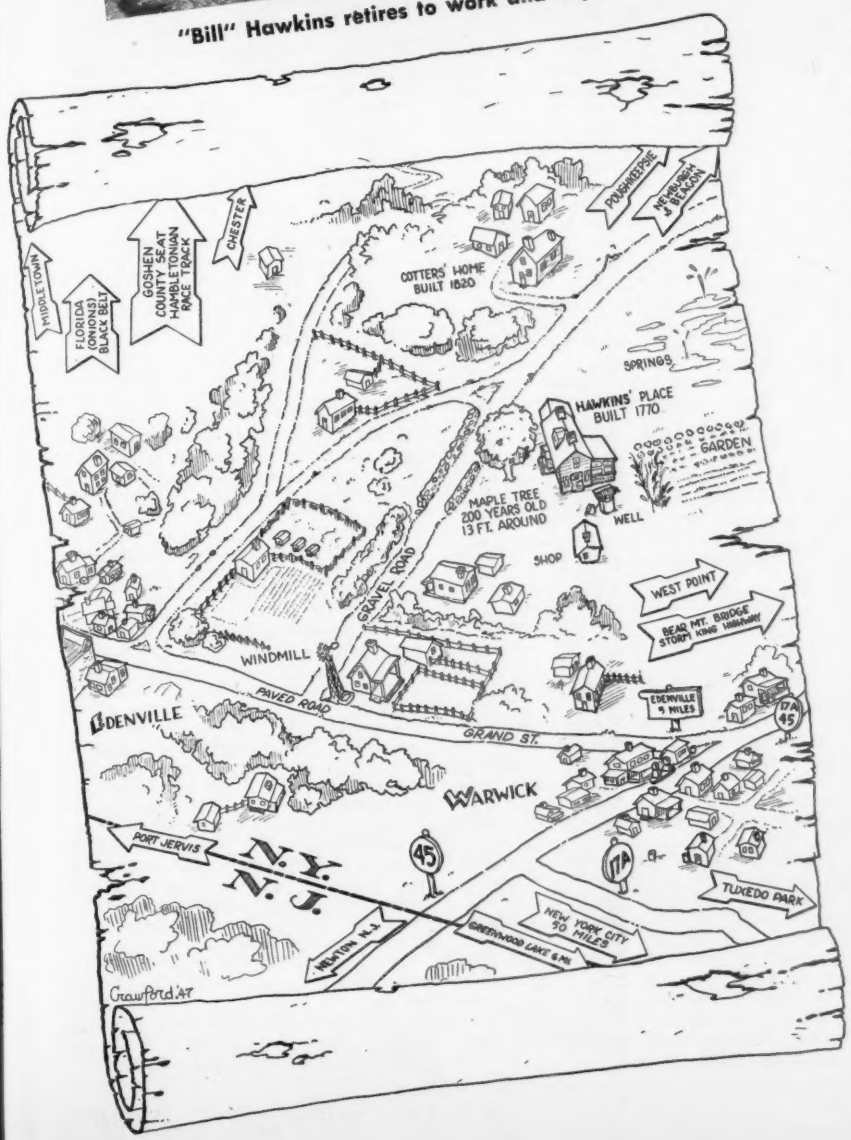

*(Continued from page 13)*


hand work was placed in the school museum two weeks prior to the assembly. Books on Turkey were found on reference shelves in the library. Turkey's art and contributions to the culture of the world formed the basis of study in the art classes, and the Glee Club learned a song of Turkey. Thus a correlated program was in process to produce the assembly when the Press Attache at the Turkish Embassy in Washington, D. C., was the speaker. Students preside at all assemblies and give an historical background of the speaker.

This year the theme for senior assemblies was "What Price Peace." Some of the topics for discussion were: United Nations Security Council, United Nations Youth Organization (student assembly), Sacrificial Service, Man's Loyalty to Man, Economic Security, Culture Rather than Militarism, Atomic Energy for Achievement and Abundance, Healthful Thinking for Peace, Knowledge of All the Peoples of the Globe, Differences Without Hatred, and Precedent of the Spiritual Over the Material. These topics constituted the year's work and culminated in a commencement pageant, "Education for Peace."

# BACK TO THE SOIL

"Bill" Hawkins retires to work and enjoy rural life




**From the Editor-in-Chief:** Many of our AVA members in the field of vocational and industrial arts education have expressed an interest at various times in knowing about the activities of some of our leaders who have retired. Some of these leaders are as active as ever but are following their own devices or inclinations, something we would all like to do. We plan to insert in the *Journal* from time to time short stories or presentations which will give our members some interesting information about these men and women. The following information about Bill Hawkins is a good illustration of what we have in mind.

Dear Friends:

This letter is written for the purpose of answering some of the questions asked by friends with whom I have been in contact since retiring from Government Service. *Where will you live? What will you be doing? How can we get in touch with you?* These have been asked most frequently.

Well, I'll be living in a happy combination of Colonial architecture and modern conveniences. A house built about 1770 or 1780, it still retains the original wide boarded floors, handhewn timbers, capacious fireplaces, and stone-walled cellar. It's a house restored but not remodeled by Mrs. Lester Cotter, the artist, who lived in it and from whom we (two sons and myself) purchased it. Mr. and Mrs. Cotter are now our nearest neighbors, about ⅛ of a mile.

Our mail is delivered from Warwick, New York, by R. D. Carrier #2 (his name is Hawkins too). Edenville, only ¾ mile distant, has a post office and two general stores (groceries, meat, etc.) but no delivery of mail. Our telephone exchange, express office, freight station, telegraph office, bus depot, and banks are in Warwick, three miles away.

What I will be doing outside of the garden and shop will depend upon how much you folks want to use me. American Tech has imposed no duties on me except to write my own ticket. My office will be the southwest corner room of our home.

Georgialice Davice from Denmark, South Carolina, who has looked after us for nearly 20 years, will continue to fry our chicken and make our beds as well as our biscuits. The boys will be home week-ends and holidays.

Hunting, fishing, horseback riding, swimming, skating, and skiing will each be alloted time according to season and inclination—yes, we have six fertile acres on which to expend any surplus energy.

Greenwood Lake (excellent swimming and fishing), the Hudson River with Bear Mountain and the Storm King Highway, to say nothing of the Goshen racetrack, are within easy driving distance. It is a veritable Garden of Eden—Mount Adam and Mount Eve are within hiking distance.

Now if you have some question not covered by this letter or the map, let's hear from you.

Sincerely yours,

***L. S. Hawkins***

Director of Educational Research
The American Technical Society

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**Personal Business Law,** by Robert O. Skar, Arnold E. Schneider and Ben Palmer. The McGraw-Hill Book Co., Inc., New York, N. Y.

A cynic has said that like hash, laws cease to inspire respect in proportion to how much we know about how they are made. This cynic would have occasion to revise his thinking if he had read *Personal Business Law.* How law is based on reason and justice, and how law protects us, are fundamentals plainly set forth by the authors. From such a beginning, the knowledge of the more simple but fundamental aspects of business law is developed.

The book seems to merit a place in general secondary education as well as in the field of business education. It is a commonplace to say that an elementary knowledge of the law will give a student a better understanding of the society in which he is living. This is true whatever his occupation or financial circumstances may be. The authors go still further to point out certain practical situations such as "You may win and yet not collect," and "Building (a home) involves finance rather than law."

The authors have done a further valuable services in drawing their illustrative cases mainly from the areas in which high school students have had experience or from situations which they realize soon may confront them. It is likely that many high school pupils who have access to this book will decide that it is interesting as a basic text, as a reference, or for general reading.—*Ablett H. Flury, assistant in secondary education, New Jersey.*

**Your Farm** (Magazine) James A. Rice, 55 E. Washington St., Chicago 2, Ill.

*Your Farm* consists of a digest of selected articles which have been published in some of the leading agricultural magazines. The articles have been condensed in order to conserve space and to enable the busy agriculturalist to review a number of articles which he might not otherwise have the opportunity to read. The subjects selected are timely and cover a broad field of interest. For this reason the magazine should be a valuable reference for all-day students, young-farmer and adult-farmer classes in vocational agriculture. It should also be a desirable reference for farmer-veteran classes in agriculture.—*Glen C. Cook, assistant professor of education, Michigan State College, East Lansing, Mich.*

**Jigs and Fixtures for Mass Production,** by Leland Bryant and Thomas Dickinson. Pitman Publishing Co., New York.

This book is the best source of information on the subject of jigs and fixtures that has come to the attention of the interviewer. It covers most types of jigs and fixtures on a very broad basis—their application to industry, good design principles, the economy of their use, and necessity. There is a liberal amount of authoritative information on how departmental contribution can be made for its ultimate working and practical ability.

The book presents accurate and valuable information on the general subject of tooling. It should prove quite valuable to the machine shop and drafting instructors as reference material. Such reading reference will give the instructors an overall picture of the newest method in tool design. —*Stanley J. Perkins, state supervisor of trade schools, New Jersey.*

**Outdoor Jobs for Men,** by Vocational Guidance Research. The Vanguard Press, Inc., New York, New York.

This book was prepared for the information and guidance of men, young and old, who yearn for outdoor life and for "working hours spent beyond walls." It describes nearly 400 occupations which men with the outdoor urge may enter with pleasure and profit. These occupations are pictured not merely as jobs, but as challenging types of service that make worthwhile contributions to the general welfare and progress of the nation.

However, the inspirational approach in the job descriptions is balanced by a frank evaluation of the hardships and disagreeable factors involved. The treatment of each occupation includes authentic information regarding salary range, sources of employment information, the extent of present and future opportunities in the occupation, qualifications required of workers, suggestions as to the type of training needed, and how this type of training may be obtained. A variety of specific outdoor jobs are treated under such general classifications as forestry, rural services, farming, building trades, public works, transportation, communication, salesmanship, public service, and independent business enterprises.

The breezy, literary style employed in writing this book will please readers for it is interesting as well as an informative document. — *Arthur B. Wrigley, state supervisor of trade and industrial education, New Jersey.*

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**Essentials of Strength of Materials,** by T. J. Pisani. D. Van Nostrand Co., Inc., New York, N. Y.

This book is particularly applicable for use in our post high school terminal courses, which might be called sub-engineering studies. The author has introduced applied mathematics and physics on a purely functional ground. A mastery of the material offered insures the trainee of an excellent foundation in the study of materials and the rudiments of design.

Chapter 2 on vector quantities is presented in form so that any person of average intelligence and with the fundamentals of basic science and mathematics can master it. For instance, the principles of concurrent force and the parallelogram law of forces are stated in a very brief and terse manner so that such terms as resultant force, component forces, and equilibrant can easily be well fixed in the student's mind.

In Chapter 3, discussing simple stresses, the elementary terminology and definition of such terms as tension, compression, shear, unit stress, strain and the modulus of elasticity, and the factor of safety are excellently defined and appropriate problems given which should present fascinating study to any student having even a minimum of background. The remainder of this book is equally thorough and apparently written with full appreciation of the learner's point of view in mastering such information. Proper directed study in the scientific principles, coupled with adequate practice in the problems in design, will add materially to the student's concept for what technical design means. It seems that this book as well as being a text for the strengthening of materials is an excellent book in the principles of machine and structural design as well.—*R. L. Welch, state supervisor of trade and industrial education, Wisconsin.*

**How to Find the Right Vocation,** by Harry D. Kitson. Harper & Bros., New York, N. Y.

This book has been written for three groups of people: high school pupils, young people who should change vocations, and adults who should make a change. It is a revision of the 1929 and 1938 editions. The author applies the principles underlying occupational choice and occupational progress used so effectively in the earlier editions, to the same problems under changed conditions, and adapted to after-war problems.

A worker should be happy in his work, should feel as if it were play; this the author contends is not only a possibility but a very probable attitude.

Occupations change and so must those who prepare for them. The author gives suggestions for such development. He shows that finding the right vocations consists of studying oneself as to aptitudes, interests, limitations; studying occupations as to possibilities and requirements for entering and making progress; making a choice; and formulating a plan of action. In showing this he discusses the problem under the following subjects: (1) What vocation was I cut out for? (2) Exploring the occupations; (3) Lives of great men all remind us; (4) Count the rungs on your ladder; (5) My father wants me to be a broker; (6) Many jobs require special training; (7) How to get a job; (8) You may have to take some tests; (9) How to get interested in your work; (10) How to get a raise; (11) Your boss is rating you; (12) Women's chances have improved; (13) Keeping books on yourself.

The chapter on expansion of vocational opportunities for women is very helpful and the author has treated adequately the problem of a parent's part in the child's selection of an occupation. The book is, in fact, helpful for any person faced with making occupational adjustments.—*Dolph Camp, state supervisor of occupational information and guidance, Arkansas.*

**Sheet Metal Mathematics,** prepared by the New York State Vocational and Practical Arts Assn. Delmar Publishers, Inc., Albany, N. Y.

The book consists of 263 pages and is divided into two types of units—basic principles and assignments. It is most usable in full-time vocational classes or in a technical high school. The mathematics includes common fractions, reading of scales, labor and material costs, micrometer measurements, percentage, calculations based on plane geometry and trigonometry.

In general, the book covers applied mathematics in a rather broad field. Many of the problems are not vital to the usual practice of the sheet metal trade, but rather are valuable to give the learner a thorough understanding of the mathematics which might be applied.

In the training of apprentices where only 400 to 600 hours of technical information may be taught during the whole period of indenture, only certain sections of this publication would be directly applicable to training on the job.

As a whole, the book contains the instruction which is auxiliary to the trade rather than directly related. In preapprentice training the book will serve an excellent purpose.—*R. L. Welch, state supervisor of trade and industrial education, Wisconsin.*

**Home Mechanics,** by William H. Johnson and Louis V. Newkirk. The Macmillan Co., New York, N. Y.

This book is an introductory text for classes of beginning pupils. Its major objective is in line with a recognition of the need for education for intelligent consumption which has been developing in industrial arts and other areas of public education during the last few years.

The plan and organization of the authors is a departure from the traditional conception of home mechanics. In addition to problems involving appliance repair and adjustment, numerous "craft projects" are suggested to provide additional experiences with tools and materials used in the

five instructional units: electricity in the home, utensils and appliances, plumbing and heating, doors and windows, and care of the home and garden.

The photographs and drawings are clear and well-selected to illustrate the text. Although the learning units are technical in nature, the vocabulary is simple and should be read with ease and understanding by adolescent boys and girls.

More emphasis could have been placed on explanations of the mechanical principles of household appliances and things to look for when selecting and purchasing such items as irons, washing machines, refrigerators, furnaces, etc. A unit on the selection, use, and care of some of the common hand tools used by home mechanics would have been of value in connection with the other units.

Teachers and administrators interested in a problem of living-approach to general education will find this book a valuable contribution to the consumer education and practical handy-man phases of their programs. *—John R. Ludington, professor of industrial arts education & state supervisor, North Carolina.*

**Electricity,** by Charles S. Siskind. McGraw Hill Book Co., Inc., New York, N. Y.

The eight chapters of this book on electrical principles, practices and experiments are excellently presented in language which senior students can understand.

The author has wisely indicated the students who could best profit by the book; "senior high schools, vocational schools, junior colleges, technical institute classes, and short courses given to non-electrical engineering students." In addition, the book should prove valuable as a review for students who may be re-entering training courses which were interrupted for various reasons, and for students in trade extension courses.

The method used in presenting each new phase of electrical practice or theory is unique, making the formulas, the necessary mathematics, terminology, schematics, and allied subjects appear as an integrated part of the whole.

The summary and lists of questions at the end of each chapter, and the listing of visual aids in a separate section by chapters, materially aid the instructor. The appendix is a brief history of 27 great men in electrical science, and important electrical developments.*—John J. Harris, supervisor, industrial part-time education, trade and industrial education, Mich.*

**FM Simplified,** by Milton S. Kiver. D. Van Nostrand Co., Inc., New York, N. Y.

The latest of the books by Kiver follows along the lines of his previous contributions. A certain amount of mathematics is necessary to an understanding of FM and a sufficient amount has been included.

The book is divided into five sections: The Fundamentals of FM, FM Receiver Principles, FM Transmitters, Receiver Alignment, and Commercial Receivers. The material is presented in a logical sequence and is on a level which the average technical student can grasp.

Section II analyzes the various types of circuits. The chapter is complete and the reasons for the different circuits are clearly pointed out. The third section on transmitters presents the principal types of commercial FM transmitters. The latest developments in transmitter practice are included. Section IV is one of the practical sections which has been included. It stresses the importance of correct alignment and describes in detail the visual method using the oscilloscope. The final section analyzes in detail three popular FM receivers. It is a good section which should be a great help to practicing technicians. The chapter on receiver servicing compares the procedures used in AM and FM servicing techniques.

The book was nicely conceived and fills a gap in the technical book field. It is on a vocational and technical school level and will probably be adopted by many such institutions. *—H. Warren Duley, chief instructor, Radio-Electronic Institutes of America, Inc.*

**Our Rural Communities,** by Laverne Burchfield. Public Administration Service, Chicago, Ill.

This is a guidebook to published materials on rural problems. It was written to present a brief picture of the major problems challenging our rural communities today, and more particularly to serve as a guide to the body of literature available concerning those problems. An attempt is made to furnish rural leaders and others interested in the problems of rural America, with factual statements about major areas of rural life, and annotated bibliographies where additional information may be gathered.

**Aircraft Sheet Metal** and **Aircraft Welding,** by Col. R. H. Drake. The Macmillan Co., New York, N. Y.

The first book presents practically all data and information that a mechanic should know and be able to use in the area of aircraft sheet metal work. It covers most of the necessary requirements for CAA mechanics licenses. There are chapters on forming and fastening of metals and such operations as stretching, shrinking, binding, crimping, drilling, riveting and welding are well described.

The book would serve best as a mechanics handbook. Procedures are authentic and practical, but it is not presented on a progressive and logical unit operation sequence essential in a basic text.

*Aircraft Welding* deals with the procedures necessary for developing good welding practices for alloy steels, aluminum, magnesium, and steel plate. It also includes chapters on metals, welding equipment, blueprint reading and construction practices. There are fine illustrations and a list of suggested jobs around which a course of study could be included. *A. J. Elges, supervisor, trade and industrial education, Michigan.*

*(Continued on page 35)*


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**As a service to our readers we present this round-up of new equipment, materials, and catalogs of interest to vocational educators. For further information write to the AMERICAN VOCATIONAL JOURNAL, 220 E. 42nd St., New York 17, N. Y.**

**The Sheldon Machine Co., Inc.,** manufacturers of precision lathes, milling machines, and shapers, announce an addition to their "S-56" series of

lathes. The new S-56, the TRB S-56, employs for the first time in a moderate priced lathe, "zero precision" tapered roller bearings. To accommodate the large zero inspection bearings, the headstock has been redesigned, eliminating bearing caps and changing to a larger and solid housing.

**Allied Laboratory Instrument, Inc.,** has a new model 730 vacuum tube voltmeter, an instrument which has been designed for a specific application at a specific price. The instrument has a well-designed rf probe, with flat response to 120 mc, positive and negative readings on DC, six convenient ranges, and an accuracy of plus 3 percent AC and DC. The attenuator in this instrument does not employ cheap matched-pair carbon resistors, but utilizes 1 percent minus accuracy stabilized-film resistors which guarantee that the caliaration is maintained over long periods of time.

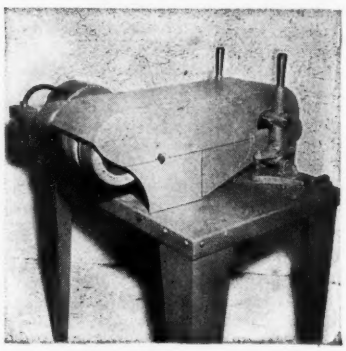
**Northern Tool and Machine Co.** has a 20-ton gap frame hydraulic press of unique design. It is a compact unit of all steel welded construction, and occupies 18x36" floor space. The Northern Gap Press has 8 inches of throat, 12 inches stroke, and a platen 12x17". A stroke selector enables the operator to adjust the stroke length in a few seconds with the tightening of a

thumb screw. Hard crome finished ram, tonnage control adjustable up to 20 tons, pressure holding valve and fast ram speed are other features.

**Plomb Tool Co.** has ten new hammers with hard plastic tips and two with extra soft tips. They use a revolutionary plastic known as Nuplaflex which is intended for threads, for painted, polished, and plated surfaces and for any parts that would be marred, scratched, or otherwise damaged by metal hammers.

**Linde Air Products Co.** has developed a power-cutting attachment for the standard Oxweld C-39, which will cut oxidation-resistant materials.

**Porter-Cable Machine Co.,** has a new addition to their line of precision abrasive belt grinders, model DBS Double Belt Bench Grinder. A heavy duty drive shaft mounts two sturdy



7" diameter by 2½" wide resilient contact rolls located side by side and only inches apart. Each contact roll is aligned with an idler adjustable for abrasive belt tension, tracking and lining up with the contact roll. This provides for the use of two endless metal cutting abrasive belts 2½" wide by 60" circumference. The result is a two station grinder. One can be fitted with a coarse abrasive belt for rough grinding, the other with a fine grit belt for finishing.

**DonJer Products Co.** has a new finishing method providing velvet-like finish on articles for the home, hobby and small shop. An introductory kit of "Suede-Tex" contains undercoat adhesive in two colors, brown and green, the Suede-Tex in the same colors, an applicator brush, a bottle of thinner, and patented, high-velocity spray gun for applying the Suede-Tex.

**Henry Disston & Sons, Inc.,** have a new set of quality wood turning chisels for the professional or home craftsworker. The blades of the eight chisels in the set are made of the highest quality carbon steel and are 5¾" long. The 10" hard-wood handles were es-

pecially designed for balance and tireless turning. The eight chisels include a 1" skew, ½" skew, ¾" gouge, ½" gouge, ¼" gouge, ½" spear point, ½" round nose and ½" parting tool.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## BOOKS

*(Continued from page 33)*

**Leathercraft,** by Robert L. Thompson. D. Van Nostrand Co., Inc., New York, N. Y.

This is a clear, concise little book, well written and refreshingly easy to read and understand. The material is organized and presented for use in the industrial arts general shop on the junior high school level. The first chapter deals with the history of leather and leathercraft, from prehistoric times to the present. The second deals with materials and processes used in the leather industry.

In chapters III through XI, a series of beginners' projects is presented, progressing from the simple to the more difficult. Each chapter is similar to a job sheet, and provides all the necessary information on materials, tools, operations, and processes for procuring the project under discussion. The step-by-step instructions are complete and explicit; the novice in leathercraft should encounter no difficulty in following them. The actual designs to be tooled on the various projects are not provided because, in the words of the author, "the individual reader's taste and diversified interests are too varied to be even partly satisfied in a book of this type." Thus, exercise of individual initiative on the part of the pupil becomes necessary in obtaining suitable designs.

The final chapter in the book contains valuable suggestions for leatherwork teachers.

The book has more than 30 line cuts and 146 separate half-tones. Nearly every manipulative operation explained in the text is illustrated with a close-up how-to-do-it picture. The only criticism of the illustrations is that a few cuts seem to have been made from other engravings rather than from original photographs, resulting in an unpleasant texture.

In attaining its objective, "to present fundamental leather handicraft activities in a clear and practical manner," the book is completely successful.—*S. C. High, Jr., Hugh Morson High School, Raleigh, N. C.*

**Turkey Management,** by Marsden and Martin. The Interstate, Inc., Danville, Ill.

Since 1939 when the first edition appeared, this book has been a standard aide and guide. The new, greatly enlarged and entirely revised fourth edition is the last word relating to the American turkey industry.

The history of the truly American contribution to the poultry industry is interesting and authentic. The treatment of the breed problem is clear and helpful. Handling of turkey growing includes breeding, hatching, rearing, feeding, housing, and management, and is particularly well arranged and presented.

The student will find ample references to all of the research which has formed the basis of the book. Preparation of turkeys for the market as well as each step of marketing, is well handled.

The economical and efficient handling of turkeys is a big enterprise, and *Turkey Management* presents the art and science of growing turkeys completely. Its 775 pages are well written and worth while. It is an outstanding text and reference work.—*Willard C. Thompson, chairman, Department of Poultry Husbandry, Rutgers University, and the New Jersey Agricultural Experiment Station.*

**Farm Tractor Maintenance,** by Ivan Gregg Morrison. The Interstate, Inc., Danville, Ill.

Widely scattered information regarding farm tractor maintenance and care is brought together in this book. It should be valuable to all interested in the operation, care, and repair of farm tractors. It is written in clear, concise terms and can be understood readily by high school vocational students, veterans enrolled in tractor shop training programs, young farmers enrolled in part-time classes, adult members, and other farmer or tractor operators.

Technical aspects of the work are phrased for easy understanding. Numerous, well-chosen pictures and diagrams aid materially in illustrating each important step. The illustrative materials are selected from a wide variety of up-to-date makes of farm tractors, thereby bringing out individual differences in each machine as far as preventive maintenance, mechanical service, operation, and trouble shooting are concerned. The materials are well organized and are


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# Better Art and Drafting *with Sheldon Tables*

Students of education recognize the transition taking place in teaching arts and handicraft. Today, students are permitted to discover their own particular aptitudes while developing a lay appreciation of the various aesthetic and craft traditions. Facilities, therefore, must provide for several different types of assignments and projects in the same room. While the simplified design of Sheldon Art and Drafting Tables add greatly to student comfort and convenience, a high degree of standardization provides adequate storage facilities for numerous assignments.

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divided into four sections covering tractor construction, fuels, oils and greases, carburetion system, lubrication system, cooling system, ignition system, servicing the engine and chassis, general suggestions on operation and safety precautions.

The book, in handy size, will find a welcome place in the home farm shop on all tractor-operated farms. —*M. L. Bailey, assistant professor, agricultural engineering department, Michigan State College, East Lansing, Mich.*

**Adventures with Plastics,** by Newkirk, Hewitt, and Zutter. D. C. Heath & Co., Boston, Mass.

*Adventures with Plastics* is a welcome addition to the growing library on plastics for student and home craftsman. It has a happy balance in content which makes it valuable to a beginner and respected by the expert.

The first chapter, "Tools and Processes," is a gem. All necessary techniques for fabrication of the acrylics are described and beautifully illustrated. There are eight chapters on projects including ideas for jewelry, desk accessories, fixtures, articles for the home, and preserving specimens.

The book is especially strong in well-illustrated projects, including step-by-step procedures. For the most part the design of the projects is good and some are very clever. A few could well have been omitted, particularly those employing designs from traditional ornamental metalwork, since plastics are 20th century materials.

The chapter on "Types of Plastics" is excellent and the final chapter, "Plastics in Modern Industry," rounds out the content with a description of basic industrial processes. — *Delmar W. Olson, associate professor of industrial arts, Kent State University, Ohio.*

**I Find My Vocation,** by Harry D. Kitson, McGraw-Hill Book Co., Inc., New York, N. Y.

Written for the high school pupil, it gives realistic information about various career fields and the requirements for success in each. The author is careful to point out limitations as well as opportunities.

The book is readable, authentic, up-to-date, and well illustrated. It contains 75 illustrations, a number of tables, graphs, and drawings, and may be used as a text in a class on occupational studies or a unit on occupations in a social studies class, or as a general reference book.

The author understands the psychological approach to the selection of an occupation. He urges the pupil to investigate an occupation in which he may have possibilities and gives an excellent guide for such investigation. There is a comprehensive bibliography at the end of each chapter.

The chapter on "Getting a Job" is rich in suggestions and discusses the subject under the following subheadings: 1) Plan a campaign; 2) Getting a job is selling yourself; 3) Discover the employer's in your line of work; 4) Study the commodity; 5) Start in your own locality; 6) Writing a letter of application; 7) Interviewing the employer; 8) Filling out the application blank; 9) The question of pay; 10) Aids in the quest; 11) Public employment office; and 12) Legal requirements regarding the work of minors. This kind of treatment is followed in all 22 chapters, and the final summarizes general principles in tabloid form.

The book is a complete revision of the 1937 edition with two new chapters, one dealing with social security, the other with unemployment compensation. The revised list of occupations conforms to the "Dictionary of Occupational Titles." — *Dolph Camp, state supervisor of occupational information and guidance, Arkansas.*

**Raising Livestock,** by Walter H. Peters and George P. Deyoe. McGraw-Hill Book Co., New York, N. Y.

This is a new text providing up-to-date, practical information on raising farm animals. It covers all important aspects of problems in this field which confront students of vocational agriculture in high school, young-farmer, and adult-farmer classes. The text is organized around activities in livestock production such as selecting, feeding, housing, management, breeding and improving, etc. Students can easily find material needed in making decisions or in performing skill operations in livestock production.

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ple, in the chapter on feeding livestock, materials provide an understanding of basic practices and principles as they apply to all kinds of livestock, followed by a detailed treatment on feeding each kind of livestock. A similar plan is used in other chapters.

Marketing livestock and livestock products, and preparing and processing such products for home use, are also given attention. Step-by-step directions on how to perform the jobs that need to be done, are included.

New developments in selecting, improving, breeding, feeding, housing, maintaining health, and the various other activities connected with raising livestock are treated. Newer scientific findings are related to selection and breeding of animals, with emphasis on desirable kinds of records and their use. Suggested activities that emphasize experiences helpful in applying practices follow each chapter.

Frequent reference is made to activities with livestock projects which will be of interest particularly to students and teachers of vocational agriculture.

The book is exceptionally well illustrated. The organization, method of approach, treatment of subject matter and illustrations combine to make it an outstanding contribution in its field.—*Raymond M. Clark, supervisor, agricultural education, Department of Public Instruction, Lansing, Mich.*

**Television Primer of Production and Direction,** by Louis A. Sposa. McGraw-Hill Book Co., Inc., New York, N. Y.

This book presents in a simple and concise manner the many complex operations involved in the production and direction of television programs. It is written by the director of commercial operations of one of the larger television broadcasting stations.

A general overall picture of television is given in the first two chapters. Phases of television other than broadcast, such as theater, intrastore, and industrial applications are developed. The use of photovision that may be employed in place of coaxial cable for intercity relays also is taken up. With this foundation, the next 12 chapters outline the duties, skills, and knowledge required by each member of the staff of a broadcasting station. The camera, lighting, scenic design, titles and video effects, motion picture film, scripts, commercials, production and direction, costuming, makeup, microphones and sound effects, and programming, all are included.

The explanation is given with a minimum of technical terms and a liberal display of photographic and other illustrations. Examples aid in the better understanding of many operations.

In the last chapter the future of color television and three-dimensional television is visualized as scientifically practical.

The book includes a text of the rules governing television issued by the FCC, a glossary of technical terms, and a table showing the allocation of television channels.

The author is to be commended. His book should be of value to those interested in television as a career, and should be available for all guidance courses. It would be well also for those taking courses in the technical phase of television to read it.—*Morris Slurzberg, instructor of radio and electronics, Jersey City Vocational High School, Jersey City, N. J.*

**A Handbook on Teaching Vocational Agriculture,** by Glen C. Cook. Interstate, Inc., Danville, Ill.

This is a new and completely rewritten edition of a text that has been widely used for a number of years. It covers practically all the activities of agricultural teachers in the various regions of the U. S. If a teacher wants to know the meaning of a complete teaching program and the objectives he should strive to attain, he will find the answers within the 800 pages of this book. He will also learn how to make a curriculum based on the needs of his local farming area. Other discussions include supervised farming programs, the FFA, adult and young farmer classes, and methods of teaching. The farm mechanics program of instruction receives complete and detailed treatment at the hands of the author, who is an authority in the field of shop training.

Mr. Cook has drawn on his rich experiences in formulation of philosophies and plans for good teaching in the several fields of agricultural education. He has studied the literature from many states and evaluated the state plans set up to meet regional conditions. In a number of cases he has suggested alternative plans from which the reader may choose the one best adapted to his needs.

In the chapter on young-farmer classes, special attention is given to the provisions of the national program for the education of veterans. Instructors of veterans will find many helpful suggestions in this book. Teacher trainers will find a valuable text for use in training high school teachers. It contains complete and extensive discussions of reference material, buildings, and equipment. At the close of each chapter there are lists of bulletins and articles from agricultural magazines.—*Harry E. Bradford, chairman, Department of Vocational Education, University of Nebraska.*

## *Flying*

*(Continued from page 19)*

the advisory committees composed of representatives of labor, management, and education should develop teaching materials. (6) schools should assist small business and industry in developing training programs by expanding cooperative and apprenticeship programs, providing work experience programs, developing leadership training for foremen and supervisors. (7) Make use of all training aids available to educatoin from business and industry. Develop ways of discovering them. (8) Combine the resources of business, industry, and education in understanding research projects, local, state, and national.

Evidence supports the effectiveness of the Flying Classroom as a desirable educational technique. More improvement has resulted from the field studies of the Michigan educators than from any in-service training program of principals and students. Educational institutions may soon own and use airplanes.


# A V A PUBLICATIONS

***Research Bulletin No. 1 — Occupational Adjustments of Vocational School Graduates.*** 1940. Pp. 132. Price 10 cents each; 10 or more, 5 cents each.

SURVEY FORMS for use in making local or area studies of graduates and former students of industrial, home economics, or agricultural education schools or departments; useful to occupational guidance, training, and placement programs. 1940. Pp. 4 ea. Prices: 10 copies, 15 cents; 100 copies, $1.05; 1,000 copies, $8.25.

***Research Bulletin No. 2—A Study of Industrial Teacher Education at the Graduate Level.*** 1941. Pp. 42. Price, 10 cents each; 10 or more, 5 cents each.

***An Enlarged Program of Vocational Education With Special Reference to Larger Administrative Units.*** 1943. Pp. 52. Price, 40 cents each; 10 or more, 35 cents each.

***Improving Instruction in Industrial Arts.*** 1946. Price, 25 cents each; 10 or more, 20 cents each.

***State Supervision of Industrial Arts Education.*** 1946. Free.

***America's Vocational Schools.*** 1945. Pp. 56. Prices: single copies, 20 cents each; 100 or more, 15 cents per copy; 1,000 or more, 13 cents per copy.

***The Carry-Over Into Homes of the Teaching of Family Living to In-School and Out-of-School Youth.*** 1943. Pp. 17. Prices: 1 to 9 copies, 20 cents each; 10 to 99 copies, 15 cents each; 100 or more copies, 9 cents each.

***Evaluative Criteria for Vocational Education in Agriculture.*** 1942. (Revised). Pp. 75. Prices: 20 cents each; 10 or more copies, 15 cents each.

***Manual of Directions for Use with "Evaluative Criteria for Vocational Education in Agriculture, 1942 Revision."*** 1943. Pp. 15. Prices: 1 to 9 copies, 10 cents each; 10 to 99 copies, 9 cents each; 100 or more copies, 8 cents each.

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# Visual Materials For Mechanical Drawing

**ALBERT J. ROSENBERG**
Manager, Text-Film Department
McGraw-Hill Book Co., Inc.

**The following list of visual aids may be used to supplement textual material in the field of Mechanical Drawing. It is suggested that each film and filmstrip be previewed before using as some may contain information that is too advanced or too elementary.**

**These films, filmstrips, and charts can be obtained from the producer or distributor listed with each title. The addresses of producers also are given with listings. In many cases, these materials may be obtained from a local film library or local film distributor; also, many universities have large film libraries from which they may be borrowed.**

**The running time (min), whether it is silent (si) or sound (sd), motion picture (MP) or filmstrip (FS) are listed with each title. All those not listed as color (c), are black and white.**

**All of the motion pictures are 16mm; filmstrips are 35mm. The list of sources is given at the close of the listing (as VGF).**

## INTRODUCTION

**The Draftsman.** (VGF, 11 min, sd, MP). A vocational guidance film showing the work of the draftsman as related to the various types of construction and mechanical work; indicates the magnitude of jobs available for draftsmen in industry.

**According to Plan.** (McGraw-Hill, 9 min, sd, MP). An attitude-shaping film designed to bring out the importance and appeal of engineering drawing and the reasons for studying it.

**Mechanical Engineering as a Career.** (SVE, FS).

**Mechanical Drawing** (SVE, FS). A complete course of study in mechanical drawing for beginners.

**Behind the Shop Drawing** (JH, 20 min, sd, MP). Provides an excellent introduction to drafting nomenclature; explains isometric and orthographic engineering drawing.

**Industrial Design** (Knaus, 10 min, si, MP). Shows step-by-step procedure in designing a radio cabinet from the first thumb-nail sketch to the finished drawing.

**Modes and Motors** (GM, 10 min, sd, MP). Describes complete process in designing products from the artist's first rough sketch to the finished product.

## SELECTION AND USE OF INSTRUMENTS

**Drafting Training** (Cons. Vultee, FS). Shows use of elementary drafting tools.

**"T" Squares and Triangles, Part 1** (JH, FS). Fundamental uses of a "T" Square and the 45 degree and 30-60 degree triangles; tools and equipment needed; correct care and usage.

**"T" Squares and Triangles, Part 2** (JH, FS). Manipulation of triangle to obtain angle lines.

**Use of "T" Square and Triangles** (Purdue, 11 min, sd, MP). Demonstrates the basic principles governing the proper use of the "T" Square and triangles; shows how a variety of angular lines may be constructed using these tools.

**Instruments and Materials** (IIT, 18 min, si, MP). Shows technical drawing with properly arranged drawing table; use of drawings and blueprints.

**Drafting Tips** (PSC, 28 min, sd, MP). Shows procedures in developing a drawing; use and care of drafting equipment.

**Ink Work and Tracing** (Purdue, 30 min, si, MP). Shows various steps in preparing tracing on cloth; explains procedures to follow with emphasis on use of instruments and the order of inking in producing a desirable tracing.

## LETTERING

**Practical Lettering** (Cocking, 25 min, sd, MP). A brief introduction to lettering, followed by a demonstration of freehand construction of letters and numerals of commercial gothic lettering in close-up; both pencil and speed ball techniques are used.

**Capital Letters** (Purdue, 20 min, sd, MP). Shows the construction of single stroke, inclined commercial gothic capital letters, ampers and numerals on ruled grid.

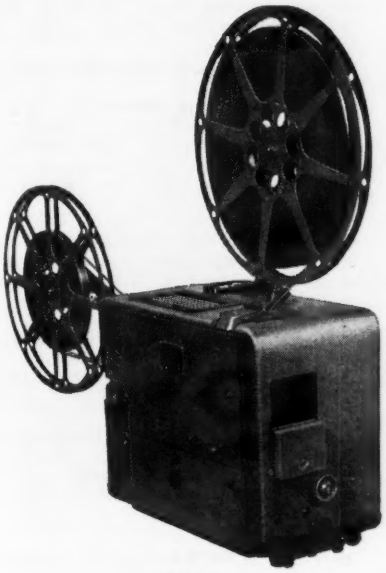
**Lower Case Letters** (Purdue, 13 min, sd, MP). Demonstrates construction of each lower case letter.

**Basic Standards in Mechanical Drafting** (Eberahard Faber 16x24" wall chart). Shows lettering, alphabet of lines, dimensioning standards, and sectioning practices.

## ORTHOGRAPHIC PROJECTION

**Introduction to Mechanical Drawing** (Cocking, 20 min, si, MP). Shows preparation of materials and methods of procedure for making drawings of articles requiring one, two, and three views.

**Orthographic Projection** (McGraw-Hill, 17 min, sd, MP). Develops theory



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of orthographic projection by animated drawings and three-dimensional models; demonstrates step-by-step procedure in making an engineering drawing.

**Orthographic Projection** (McGraw-Hill, si, FS). A follow-up to the motion picture of the same title.

**Orthographic Projection** (Purdue, 30 min, si, MP). Demonstrates proper methods for representing objects on paper with three orthographic views; shows how to transfer dimensions and use the instruments.

**Multiview Drawing** (Purdue, 30 min, si, MP). Demonstrates representation of object by means of orthographic views. Shows use of scale for making measurements and use of the "T" Square and triangles for constructing the views. Demonstrates technique of transferring a measurement from one view to another or of constructing a third view by projecting from the other two views.

### AUXILIARY VIEWS

**Auxiliary Views** (Purdue, 15 min, si, MP). Demonstrates principles of sectioning, transparent cutting planes; shows full, half, and off-set sectional drawings.

**Auxiliary Views: Single Auxiliaries** (McGraw-Hill, 20 min, sd, MP). Explains theory by animated drawings and three-dimensional models; describes steps in constructing various types of single auxiliaries.

**Auxiliary Views: Single Auxiliaries** (McGraw-Hill, si, FS). A follow-up to the motion picture of the same title.

**Auxiliary Views: Double Auxiliaries** (McGraw-Hill, 15 min, sd, MP). Explains theory of oblique views in engineering drawing, followed by a demonstration of drawing an object with an oblique face.

**Auxiliary Views: Double Auxiliaries** (McGraw-Hill, si, FS). A follow-up to the motion picture of the same title.

### SECTIONS AND CONVENTIONS

**Sections and Conventions** (McGraw-Hill, 15 min, sd, MP). Illustrates purpose of sectional views; explains symbols used; describes various types of sectional views and principles followed in constructing them.

**Sections and Conventions** (McGraw-Hill, si, FS). A follow-up of the motion picture of the same title.

**Sectional Views** (Purdue, 15 min, si, MP). Demonstrates principles of sectioning, transparent cutting planes; shows full, half, and off-set sectional drawings.

**Sectional Views, Projections, Finish Marks** (USOE, 15 min, sd, MP). Shows a phabet of lines and their uses, location and use of finish marks, and standard cross section lines denoting types of materials.

**Shop Drawing, Part I** (IIT, 11 min, sd, MP). An introduction to the elements of enginering drawing practice including conventional methods in use; shows dimensioning, sectioning, and cross-hatching of drawings.

### DIMENSIONING

**Selection of Dimensions** (McGraw-Hill, 20 min, sd, MP). Outlines two principles governing choice of dimensions—functional characteristics of the object, and manufacturing methods used in making it.

**Dimensioning Techniques** (McGraw-Hill, si, FS). Stresses techniques, choice and placement in standard dimensioning practice; explains meaning of symbols and demonstrates their use.

**Principal Dimensions, Reference Surfaces and Tolerances** (USOE, 12 min, sd, MP). Shows the use and theory of dimensions.

**Visualizing an Object** (USOE, 9 min, sd, MP). Shows how a blueprint is developed; how dimensions are shown by different views; how various kinds of lines are shown on a blueprint; and how special information is indicated on a blueprint.

**Reading a Three-View Drawing** (USOE, 10 min, sd, MP). Shows how to use a blueprint to visualize the object; how to interpret a blueprint; how to make a tool block according to specifications.

**Reading a Drawing of a Valve Bonnet** (USOE, 20 min, sd, MP). Explains significance of conventional symbols as applicable to mechanical drawings; how to use the blueprint as a guide in planning machine operations; how to determine dimensions not directly denoted on a drawing.

**Drawing an Anchor Plate** (JH, FS). Explains the drawing board setup and the tools required; follows through with layout of lines, holes, arcs, and dimensions; illustrates and defines the various lines in use; also arrowheads and lettering applications.

### APPLIED GEOMETRY

**Applied Geometry** (Purdu, 16 min, si, MP). Explains geometric construction for mechanical drafting showing how to bisect a line, draw tangents, and other figures with the use of the "T" Square, triangles, and compasses.

**Geometric Construction, Part 1** (JH, FS). Describes method of applying simple geometric construction principles to drawing problems.

**Geometric Construction, Part 2** (JH, FS). Presents more advanced geometric construction principles applied to drawing problems.

**Angles** (Kansas, 11 min, sd, MP). Illustrates how angles occur around us in common designs and constructions; defines the simple angle and its variations.

**Lines and Angles** (Knowledge, 12 min, SD, MP). Depicts the geometry of straight, right, acute, obtuse, and reflex angles.

**Angular Measurement** (JH, FS). Shows systems of angular measurements, degrees and radians as they are related to each other.

### SURFACES AND INTERSECTIONS

**Development of Surfaces** (Purdue, 15 min, si, MP). Shows the construction of patterns of surfaces; describes methods for right and oblique prisms, right cylinders, pyramids and cones, oblique cones.

**Intersection of Surfaces** (Purdue, 15 min, si, MP). Demonstrates procedures for finding intersections of right, oblique, and curved surfaces.

**How to Develop an Intersection: Part I** (Navy, si, FS). Shows how to make a true layout for a flat pattern of a cylinder.

**How to Develop an Intersection: Part II** (Navy, si, FS). Demonstrates steps in laying out, forming and assembling a filler neck and collar to a metal tank.

### BOLTS, SCREWS, KEYS, RIVETS, SPRINGS

**Screw Threads** (Purdue, 23 min, si, MP). Defines important terms associated with screw threads; shows step-by-step construction of National and Square threads; explains meaning of each line of the drawing.

**Derivation of Involute Profiles** (NYU Engineering, 15 min, si, MP). A step-by-step derivation of involute tooth profiles made from a pair of pulleys and a crossed belt; shows how points in the belt, in moving from a point of tangency on one pulley to a point of tangency on the other, generate the conjugate involutes on both pulleys.

### THE DRAWINGS AND THE SHOP

**The Drawings and The Shop** (McGraw-Hill, 15 min, sd, MP). Brings out reasons for certain drafting requirements by showing how blueprints are used in guiding operators of many different machines.

**The Drawings and the Shop** (McGraw-Hill, si, FS). A follow-up to the motion picture of the same title.

**Shop Drawing, Part II** (IIT, 11 min, sd, MP). Illustrates recognized procedures used in drawing various types of curves and contours; emphasizes the importance of the draftsman's responsibility to produce accurate and legible drawings.

**Lofting and Layout** (Navy, 30 min, sd, MP). Shows how the designer's small original drawings are made into full size layout on metal sheets; shows

the development of the plane from pencil sketch to production line.

**Template Reproduction** (Navy, 20 min, sd, MP). Shows modern methods of reproducing drawings on metal including photographic, x-ray, and electro-chemical processes.

**Sheet Metal Work** (Gutlohn, 20 min, sd, MP). Illustrates reading of blueprints, using drafting instruments; three basic projects illustrated: drag truss fitting, flange reinforcement, I-beam spar.

**Simple Calculations for Flat Layouts** (Navy, FS). Describes several procedures to follow in calculating and laying out on paper and constructing metal parts from such designs as flanges, bends, beads, seams, and joggles.

**Metal Drawing** (Lockheed, sd, FS). Shows the steps in detail assembly template process; suggests many engineering and tooling applications.

(There are many U. S. Office of Education and industrial motion pictures that can be used to show practices in machine shop, patternmaking, foundry, and in various other shops.)

### GENERAL

**Shop Terms and Methods** (NYU, 30 min, si, MP). Defines the mechanical nomenclature used in industry and applicable to drawing instruments.

**Scales and Models** (JH, FS). The story behind scales and models; bringing "too big" and "too small" into easy focus; how to plan, use, and understand these valuable aids.

**Locus** (Knowledge, 12 min, sd, MP). Visual explanation of locus.

**An Introduction to Vectors: Coplanar Concurrent Forces** (USOE, 22 min, sd, MP). Explains the meaning of scalar and vector quantities; the various methods of vector composition and vector resolution; shows how vectors may be employed to solve engineering problems.

**Vectors** (JH, FS). A simple means for graphic visualization of the three force properties; analyzes concurrent and resultant forces.

**Broad Stroke Drawing** (Ideal, 10 min, sd, MP). Demonstrates the art of broad stroke drawing; shows variety of strokes that can be obtained by using various surfaces of the drawing implement.

**Pictorial Sketching** (Purdue, 30 min, si, MP). Illustrates the principles of isometric and oblique drawing.

**Freehand Drawing** (Purdue, 13 min, si, MP). Shows sketching as an antecedent in drawing; illustrates use of pencil strokes, horizontal, vertical, and inclined lines in forming figures, circles, and ellipses.

**Aircraft Sheet Metal Work** (Vesco, 30 min, si, MP). Use of drafting instruments; reading of blueprints necessary; procedures and techniques of work.

**The Making of an Airplane Fitting** (Vesco, 30 min, si, MP). Drawing of design; transfer of blueprint to metal; fitting part into plane; tools and machinery.

**Basic Standards for Architectural Drawing** (Eberhard Faber 16x24" wall chart). Shows architectural details.

**Architectural and Engineering Symbols** (Frederick Post 23x35" wall chart).

**Standard Woodworking Joints** (Eberhard Faber 16x24" wall chart). Shows isometric views of common wood joints.

**Structural Drawing** (Purdue, 20 min, si, MP). Explains procedure for making pencil drawings on tracing paper for blueprinting; work is related to structural construction.

### SOURCES OF FILMS LISTED

Castle Films, 30 Rockefeller Plaza, New York 20, N. Y.
Cocking, Floyd W., 4757 Constance Dr., San Diego, Cal.
Consolidated Vultee Aircraft Corp., San Diego, Cal.
Eberhard Faber Co., Education Dept., 37 Greenpoint Ave., Brooklyn 27, N. Y.
GM—General Motor Corp., Dept. of Public Relations, 1775 Broadway, New York 19, N. Y.
Gutlohn, c/o Film-Tel, Inc., 25 W. 45th St., New York 16, N. Y.
Ideal Pictures Corp., 28 E. 8th St., Chicago 5, Ill.
IIT—Illinois Institute of Technology, 3300 Federal St., Chicago, Ill.
JH—Jam Handy Organization, 2900 E. Grand Blvd., Detroit 11, Mich.
Kansas, University of, Visual Instruction Bureau, Lawrence, Kan.


## Products and Services Guide

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Knowledge Builders, 625 Madison Ave., New York 22, N. Y.
Lockheed Aircraft Corp., Promotional Dept., 1705 Victory Place, Burbank, Cal.
McGraw-Hill Book Co., Text-Film Dept., 330 W. 42nd St., New York 18, N. Y.
Navy—U. S. Navy (Obtainable from Castle Films).
NYU—New York University Film Library, 26 Washington Square, New York 3, N. Y.
NYU Engineering—New York University, College of Engineering, University Heights, New York, N. Y.
PSC — Pennsylvania State College Film Library, State College, Pa.
Post Co., Fredrick H., 3635 N. Hamilton Ave., Chicago, Ill.
Purdue University, General Engineering Dept., Lafayette, Ind.
SVE—Society for Visual Education, 100 E. Ohio St., Chicago 11, Ill.
USOE—U. S. Office of Education (Obtainable from Castle Films).
Vesco Film Library, Audio-Visual Corp., 116 Newbury St., Boston 16, Mass.
VGF — Vocational Guidance Films, 2708 Beaver Ave., Des Moines 10, Ia.

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# With the Associations

★ The Wisconsin Industrial Arts Association will meet at Milwaukee Nov. 6-8.

★ Minnesota Vocational Association met in Minneapolis Oct. 2 and 3.

★ Indiana Vocational Association held its annual convention at Indianapolis October 23.

★ New York state directors of vocational education held their annual conference at Lake Placid Sept. 28 through Oct. 2. A. K. Getman, acting commissioner of vocational education, presided.

★ The 1948 convention of the American Industrial Arts Association will be held in Washington, D. C., May 6-8, 1948.

★ Twenty-five members of the National Association of State Supervisors of Distributive Education held a meeting during the southern and central regional meeting of distributive education supervisors in Memphis, Tenn. Roy Fairbrother, president of the association and supervisor of distributive education in Wisconsin, presided. Resolutions were passed thanking the state directors of vocational education for backing the establishment of a national association of distributive education clubs; that consideration be given by the U. S. Office of Education and the association of state directors of vocational education to calling a national conference of state supervisors and teacher trainers of distributive education; and an expression of appreciation and congratulation was extended to Marguerite Loos and members of the national committee on clubs for their work in connection with the annual convention of the Distributive Education Clubs of America.

★ Following the plan of pre-war years, Arizona teachers of agriculture and homemaking met in Prescott for their annual conference the last week in August. Main features of the program were presentations by Dr. O. A. Simley, psychologist of the University of Arizona, and an address by Nolan D. Pulliam, state superintendent of public instruction, on problems of mental hygiene. Mr. Pulliam, who has been appointed as a special assistant to Dr. John W. Studebaker, U. S. Commissioner of Education, spoke of the great progress vocational education has made, through adequate leadership on state and national levels.

The agricultural teachers stressed program planning, evaluation, and improvement of veterans' training, and use of more extensive equipment in departments of vocational agriculture. New departments this year in Arizona are at Casa Grande, Marana, and Scottsdale.

Officers of the Arizona Agricultural Teachers Association are: president, Price Curd, Buckeye; vice-president, H. B. Gray, Mesa; secretary-treasurer, V. G. LaTourette, Peoria.

"Helping families today and tomorrow" was the theme of the homemaking teachers conference. Working groups were organized for conducting a play school, for clothing construction problems, home management activities, and furniture repair and slip covers. Panel discussions were conducted for "Idea Exchange." Many teachers are planning revised homemaking departments in their schools and much interest was shown in guides in furnishing and decorating home economics departments.

In addition to the conference, there was time for work on problems of the Arizona State Vocational Association. During the annual membership roundup most of the homemaking and agriculture workers joined. It is expected Arizona will reach its quota, and that there will be a good representation from the state at the Los Angeles convention of the AVA.

# Who's Who

**Gerald Cass** has been added to the staff of North Dakota State School of Science at Wahpeton. He is a graduate of the school and has been telephone manager in Breckenridge, Minn., the past two years.

**Roland M. Torgerson** is now associate professor and chairman of the department of industrial arts, Bowling Green State University, Bowling Green, O.

**Fred Strickler,** formerly of Columbia University, has been appointed dean of the industrial arts division, Bradley University, Peoria, Ill.

**Henry A. Loats,** formerly head of industrial arts, Girard, Ohio, has been appointed assistant professor of industrial arts, Ball State Teachers College, Muncie, Ind.

**Everett Glazener** has been appointed head of the industrial education department at Arkansas A & M College, Monticello, Tex.

**John H. Grohn Jr.** has been made coordinator of the diversified trade and industrial education program at Harlington, Tex., and **L. K. Kinsey** coordinator of cooperative training at San Angelo, Tex.

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